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THE CANADA FARMER

VOL. I. No. 11.

TORONTO, CANADA, NOVEMBER 15, 1869.

NEW SERIES.

The Field.

Making Manure

Now that the busy season of the farmer is over, and he has spare time to devote to other matters than the preparation and cultivation of the soil and the garnering of his crops, his first object should be to ascertain in what way he can most profitably increase the supply of that most indispensable necessity to every good farmer—manure, for without an abundant supply of food, plants can no more grow and yield returns of food to man or animals than the latter can exist without it.

There are many ways in which, by careful husbandry, the farmer can not only save, but largely increase the quantity of manure produced on his farm.

Time was, and not very long ago, either, when the virgin soil of Canada seemed so rich and inexhaustible that to manure it was considered a superfluity of labour, and great piles of plant food were allowed to accumulate round barns, stables, and sheds for years, till the sills of the buildings rotted away so much as to require them to be rebuilt; and we have known many cases where, in order to save trouble, the buildings themselves were removed to a new location, and the piles of manure allowed to remain on the old spot, constantly decomposing, and spreading disease and even death to both man and beast, through the foul gases generated by decomposition. Even now we can recall places where we have this season seen the same process going on, especially in the back townships. The amount of manure allowed to go utterly to waste every year, on many farms, at a fair estimate, would, if judiciously saved and applied to the soil, increase their productive capabilities fully one-third. But

this kind of farmers take no agricultural paper—nor, probably, a paper of any kind—so we need not preach to them on the value of wasted plant food. Were we to tell one of them that he could make a hundred, even two hundred dollars, by hauling out his wasting manure heap and spreading it over his fields, he would perhaps say that he had no time to do it; but if we told him that a twenty dollar gold piece was buried in his barn-yard, he would for certain turn over every bit of it, and work early and late, sunshine or rain, till he had spent ten times the value of the piece in the labour of looking for it.

The thrifty, intelligent class of farmers—those who aim at constantly improving their farms and adding to their resources and fertility, do not need to be told the value of manure; but by the exercise of a little of the powers of their brains, they may readily find means of increasing their supply of plant food, without going to any great expense in purchasing an artificial article. If a swamp is anywhere near, now is the time to go out and dig a ditch round the sides of a small patch in it that the surface water may dry out before the ground freezes. Or still better, dig out the muck at the edge of the swamp, throwing it up in heaps on the dry land adjoining, so that it may get partly dried out and the action of decomposition begin. Then the whole barn-yard and approaches to it, the lanes leading into it, through which the cattle lounged at milking times, should be thoroughly cleaned out, and all the material scraped off be piled into a large heap, out of the reach of the further trampling of stock, and covered with a few inches of dry earth. Then cover the whole yard with a thick layer of swamp muck, on that spread straw, and during the winter the stock will work the whole up, the

droppings from the stables and byres can be added. When the first layer of straw has been pretty well worked up, another layer of muck and straw may be added, or if the yard gets too soft and dirty, the manure made may be added to the heap already collected, and a fresh layer of muck and straw laid down. If the stock is kept well housed, as it should be in our cold climate, they will manufacture more manure, and of a richer quality, than if they have to roam over a large yard driving each other from corner to corner. A vast deal of material can be found, out of which to make plant food, but the chief thing is to keep enough stock to make it possible to work up all the material that can be had into a form that will render it fit for immediate use for the next year's crops. If straw is very abundant it would pay to cut it up fine before using it as bedding for stock, or litter for the stock-yard, as it works up and decomposes a great deal more quickly when cut than when whole. Burnt peat makes a famous absorbent of ammoniacal manures where it can be had near enough to make it pay to draw the sods from the bog.

In any case manure is always better for being properly made and the matter of composting it attended to. Nature's mode is but slow, and unless the farmer takes pains to work up and manipulate the materials at his command in order to hasten their decomposition, he will never get a sufficient supply of really good manure. It is wonderful what a difference in both bulk and value there is between manure made by proper management in composting, and that which is simply the result of throwing straw on the yard and allowing it to be trampled into a solid mass by stock, and then drawn out to the fields in a long undecomposed green state. Well-made manure is worth twice as much as that made in the common way.

As Others See Us.—A New View of Canadian and American Agriculture

Statistics are one of the most valuable of modern improvements; but although so useful, nay, invaluable, when properly applied, nothing can be more dangerous when people make use of them either to construct new theories, or to support preconceived ideas. A most notable instance of this has lately occurred in our respected and generally thoroughly reliable contemporary, the *Gardener's Chronicle and Agricultural Gazette* of England.

In the number of that journal of the 28th August the editor seems to have had a fit of statistics, and to have bent them to his own preconceived ideas, the following being a part of the results. There is a great deal more, equally mistaken, but which does not affect Canada.

After quoting "McUlloch" to prove that "America generally has been greatly over-rated as a grain-producing country," the editor goes on to say that—

"The small wheat crop of the rich soils of the United States is popularly attributed to the slovenly system of cultivation. But this is an error. The cause of the extremely irregular wheat harvest lies deeper than the mere defects of tillage, which might be corrected, and it is irremediable. If the wheat region of North America were coloured on a map, it would be seen to include only a very small part of the country. The northern limit may be tolerably well marked by a line drawn from Kingston, through Lake Simcoe, to Lake Huron. And it is because the *inhospitable soil and rigorous climate north of this boundary line* precludes the profitable cultivation of wheat that Canada has disappointed the original expectation of her exporting capabilities."

And again, further on, he says:—

"In Upper Canada the wheat district extends farther from the river (*i.e.*, than in Lower Canada), and some grain is grown for exportation into the States, and outward by the St. Lawrence. But the wealth of Canada is derived from the lumber trade, and not from agriculture, for *which she is naturally unfitted by the extreme rigour of the climate, and the poverty of a great portion of her soil.*" The italics are ours.

Poor Canada. It is well "that we live not in the report" of such statisticians, and that we can afford to laugh at such assertions; but these wholesale denunciations of our soil and climate may influence emigration in a most mischievous degree, and cannot be too soon met or too strongly denied.

The climate of Canada is the most healthy in the world. The records of British troops prove this, and they are the most reliable bills of mortality that can be referred to. Our climate is also one especially adapted to the growth of fall wheat of the finest quality, as has been proved a thousand times. No one doubts that we used to grow enormous

crops of the finest white wheat, the sample of which has never been surpassed and but seldom equalled. If we have fallen off in the production of that class of wheat, the fault lies not in the climate, for the climate is the same as it ever was, except in variations common to the climates of other countries. That we have fallen off in the production of such wheat is not denied, and the cause will presently be shown, but it is certain that it is not the climate which is in fault.

Then again, the other broad assertion, namely, that the falling off is caused by the poverty of the soil, is also most strenuously denied. Upper Canada alone shows one continuous tract of some hundreds of miles in length, from 50 to 150 miles in width, and which comprises all the settled portion of the Province, of the most evenly fertile land in a similar latitude in the world. Taken altogether, our Western Peninsula, bordered on the south and west by the great lakes, and on the north by unsettled territory, has less waste and poor land, area for area, than even England and Scotland. The falling off in the wheat is not to be attributed to sterility or poverty of the soil. What is then to be blamed? Simply, THE MIDGE, which has for a number of years past devastated our wheat crops, and caused that falling off in exports which we all feel so acutely, and suffer from so much.

The history of the destruction of the wheat crop of Canada is the history of the midge, and as our cotemporary may not be acquainted with it, and as the history of such a misfortune must always be interesting, it may not be amiss to give it in as condensed a form as possible.

It has been the habit of late years to say that the midge was caused by bad farming, by want of drainage, by foul seed, and by various other causes, all tending to throw the blame on the carelessness of our Canadian farmers. These several allegations the writer denies. The midge has simply been a plague, which no human efforts could stop or control, and which, like other plagues, is wearing itself out. This present year has verified these assertions. The midge is now of but little injury in many parts of the Province formerly devastated; it has now met with its own natural destroyer, and hundreds of thousands of acres of wheat have been grown this season on land on which, for the last fifteen years, the cultivation of fall wheat had been abandoned. And the best feature of this state of things is that in all this wheat there is more or less of midge, but it has only done a small per centage of harm, thus going to show, not that the present is an exceptional season, but that the natural check to the midge is in operation, and that by that natural check it is kept within bounds. This fact is a most important evidence that the old time for good fall wheat is again coming, and that an improved exports will soon give a most agreeable contradiction to all croaking against the soil or climate of Canada.

The midge has long ago proved that it is quite as capable of destroying forty bushels of wheat per acre as fifteen, and that it attacks the new, virgin soil as well as the old, and that hitherto, just in proportion to the crop of wheat, so has been the crop of midge the following year. Then again, what ought to silence all such assertions as to bad farming, want of drainage, &c., is the simple fact that the midge is never produced on the *steld of wheat which it destroys*—it has been raised and hatched elsewhere, and not on the individual field which it devastates.

The midge came into Upper Canada from the United States a number of years ago. It first crossed the River St. Lawrence below Lake Ontario, and devastated the peninsula which lies between the Rivers Ottawa and St. Lawrence. It then crossed the Niagara River, on the peninsula which divides Lakes Ontario and Erie, and proceeded inland. A very few years afterwards it crossed the St. Clair River, and attacked the western portion of the Upper Canadian peninsula. It advanced from all three points about nine miles a year, spreading itself over the whole country, and carrying devastation with it.

The period at which the midge appears has always been dependent in a great measure on the season. It first assumes the fly shape in June, earlier or later according to the heat of the season, and flourishes for about three weeks. During this time all wheat which is just blossoming, or which has just begun to form in the ear, is affected. That which is so far formed as to have a tolerably firmly coated grain escapes, and that which has not yet arrived at the flowering stage, during the days of the existence of the insect, also escapes. Hence the very early wheat has always been free; that which is very late has also escaped. It is only the heavy intermediate crop which has been affected; and the better the land, or less early the wheat, the more injury was done. This is the *natural* course of this plague, but it is altered according to circumstances.

The cocoon of the midge, when it is in the shape of a yellow seed, and after the maggot has done its work, is either carried into the barn with the crop, or it falls on the surface of the field in which the wheat was grown, —mostly the latter—passes the winter in the soil, and comes out in its shape as soon as the weather is fitted for it; then it goes off to the nearest wheat field, to commence its depredations.

In Canada we generally seed down our wheat with clover; indeed, most of the clover which is grown is seeded with the wheat, and this clover forms an admirable nursery for the midge. And if we seeded down all our wheat stubbles, the midge would come up with far greater regularity than it now does. But sometimes the land is not clean enough, or the clover does not *take*, or other circumstances occur requiring the use of the last year's wheat field for other purposes. It is then, of course,

ploughed, either late in the fall or early in the spring, in either case burying the midge to a far greater depth than is natural for it, and consequently confining it under the soil, but by its being in a lower temperature keeping it back in the season for changing into the fly shape. In due time the fields are again ploughed, the former furrows reversed, and the midge once more exposed to the air and the heat. All those which have survived the burial (and generally it is a very large proportion) then come out in the fly shape, it may be days, or it may be weeks after the first hatch from the clover fields, and they then attack the wheat which may be within reach. This is the cause of an apparent irregularity in the visits of the plague, which often seems to come out at unexpected seasons, and to continue longer than its natural habits would lead us to expect. To such an extent are the yellow cocoons of the midge seen in the reversal and cultivation of the wheat stubbles, that the cocoons seem to follow the track of the harrow, and in the small indentations formed by its action the cocoons are seen to lie thickly, like so much drilled seed.

Well, fortunately for Canada, the midge, like all other insects of similar nature, after a time becomes affected by a parasite which destroys it; and it is now so affected throughout many districts which were only three or four years ago devastated. This parasite is now following the midge all through the Province, and we have every reliance that, in the course of God's providence, a very few years will see us free of it.

So far from the climate being so rigorous or the ground so poor in Canada as not to be able to grow fall wheat, our very best crops often occur after the severest winters, and it is moderation of winter, and not severity, that we have to dread. Our land is so adapted to the growth of wheat, so naturally fertile, and, so to say, elastic, that it always answers to a bare fallow; and if, in addition, a crop of green clover is ploughed in, a good crop of wheat, if not affected by the midge, is the certain result.

No doubt, the system of cropping land so long as it will grow crops, and then fallowing, is a bad one; but the fact of being able to farm so badly, and yet produce crops, is the best proof we can give of the fertility of the soil.

VECTIS.

NOTE BY ENTOMOLOGICAL EDITOR.—While we agree in the main with the foregoing remarks of "Vectis" upon the ravages of the wheat midge for many years past, and its noticeable decrease this year, we regret that we are unable to coincide with his conclusions respecting the cause of the absence of the midge. We should be only too delighted if we could be sure that there are insect parasites in this country to check this fearful pest. In Europe, whence the insect has come to us, it is well known that there are several para-

sites that prevent the midge from inflicting anything approaching the amount of injury that we have too much experience of here; but, alas! these minute friends do not appear to have reached our land yet. Because we have very little trouble with the midge this year, it is jumping to a conclusion to say that we owe the relief to parasites, it is just possible that we do, but there are not sufficient data to establish it as a fact. Our own impression is—we do not advance it as a certain conclusion—that the excessive drought and heat of the previous two seasons combined with the wide-spread cultivation of the "midge-proof" varieties of wheat, has been the cause, under Providence, of our freedom from the pest this year. We very much fear—we hope we may be wrong—that we have by no means seen the last of the ravages of the wheat midge. We agree most thoroughly with the remarks of "Vectis" in condemnation of the general practice of seeding down midge-infected wheat fields with clover; as we stated in the columns of the CANADA FARMER last year, such field should be deeply ploughed in the fall, and so have its midge tenants well buried, and their transformation retarded.

Manures—How and When to Use Them.

The best method of using stable or barnyard manure for corn or potatoes, is to haul it fresh from the cellar in the condition in which it rests in the vaults, spread it upon the ploughed field, and harrow it in with a Geddes harrow. This is what is called "long manure," and is a form which, according to the opinions of many farmers, is unsuited to immediate use; also, it is objected, that in spreading fresh manure upon ploughed fields, and covering it only superficially with earth, much of it is lost by evaporation, or, more correctly speaking, certain volatile, gaseous constituents rise on the breeze and are wafted away. In our view, both of these notions are incorrect. The excrement of animals must undergo a kind of fermentation, or putrefactive change, before it is assimilated by plants, and it is better that this be carried forward in the field, as there it is in contact with the soil, which is greedy to absorb all the products of the chemical change. Creative power has bestowed upon dry earth prodigious absorptive capabilities. If a lump of fresh manure as large as a peck measure is placed upon a ploughed field uncovered, and allowed to ferment or decay in the open air, the absorptive powers of the earth are such that it will actually attract towards it ammoniacal and other gases, and thus rob the atmosphere of its natural volatile principles. A film of earth no thicker than the rind of an orange, placed over a lump of manure, will effectually prevent loss of manurial products under all possible circumstances. It will be agreed, then, that a harrow is equally as effective as a plough in

protecting manure in the open field. It is better to have the manure near the surface, as the rains can reach it, and dissolve the soluble salts, and by percolation carry them down to the hungry roots of plants. Long manure is not lost when deeply turned under by the plough, but the farmer does not secure the whole value of his dressing under this mode of treatment in any case, and on some soils the loss is a most serious one. In the process of soap making, it is necessary to set up a leach. Now, the farmer will not try to exhaust the tub of ashes of its potash by forcing water into the bottom and dipping the liquid off from the top. The natural percolating or exhausting process is downwards, in accordance with the laws of gravity. The soluble alkalies and salts are driven downwards, and in the case of the leach we must have a vessel ready to receive them at the bottom, and in the case of the same substances leached from manure, we must have the manure so placed that plant roots will be at hand to absorb them before they pass beyond their reach.

Manure is never so valuable as when it is fresh. It then holds in association not only all the fixed soluble substances natural to the solid excrement, but much that is of great value, found only in the liquid. It is in a condition to quickly undergo chemical change, and the gaseous, ammoniacal products secured are double those resulting from that which has been "weathered" in a heap out of doors for several months.—*Boston Journal of Chemistry.*

Wheat-growing Capabilities of Upper Canada.

In an article in the *Agricultural Gazette* of August 28, 1869, a very able writer, well posted in statistics, disparages the wheat-producing capabilities of North America, and especially of Canada, and after quoting various authors in confirmation of his views winds up by saying that the people in the States eat maize from necessity, not being able to procure the nobler grain, wheat!

Now, I have lived in Canada 37 years, and during that time have been intimately acquainted with the wheat-producing capabilities of every section of this Province, from Kingston to Sarnia, and northward from Lake Ontario to Cabot's Head, as well as those of very many portions of the United States, and must beg to differ most materially from the writer of the above article, and the excellent authorities whom he quotes. Canada has not, so far as the land in Canada is concerned, disappointed any reasonable practical agriculturist in regard to her wheat growing powers. I have myself a hundred times verified by actual measurement very large yields of the best wheat, often 30 to 40 and 50 bush. per acre—those yields occasionally extending over large areas. Only last year, a tenant of mine harvested and measured 374 bushels of good fall wheat per acre

from a field of about eighteen acres, and the country papers are often found to contain statements, in which name, lot and concession are mentioned, where fifty bushels of excellent wheat are harvested to the acre. Instances can be mentioned by the thousand of such yields as 30 to 35 bushels to the acre, and for barley, peas, and oats, there is no country that will and does produce per acre more of these so-called coarse grains. It is not the fault of the land or climate—it is simply want of knowledge, capital, and above all, the low prices of produce, combined with the high cost of labour, deterring the Canadian husbandman from the necessary draining, and the heavy expenditure for manures that the English agriculturist so freely lavishes his money on. These are causes that render wheat growing here more precarious and less profitable than in the mother country. The fact that we see those heavy occasional yields so often quoted, and at the same time well know that the average yield often does not exceed one-half or one-third of those quantities, is due to many causes, not at all the fault of Canada generally, or the climate or soil, or its want of adaptation to wheat culture. If a man come to Canada with capital and commence farming, first purchasing the land, then clearing it, and after waiting for many years for the stumps to decay, thinks that he can, with nothing but hired labour, make farming pay 20 or 50 per cent. on the outlay, he will find his mistake. Under the same circumstances and disadvantages, no enterprise would, probably, be remunerative. The pioneer portion is for the man of no capital, comparatively speaking, except his hands and health.

The comparison between prices in Canada and England is of itself conclusive. In Canada the price of wheat averages about \$1 per bushel of late, say within 12 years. In England, the price will certainly average \$1 50; whilst farm labour in Canada has averaged nearly 80 cents a day, and in England probably not 40c.

In Canada we used to complain most grievously of injuries from rust, and I have often seen whole fields that would have yielded 40 bushels per acre entirely destroyed by it. This was caused by peculiarities not here necessary to enlarge on, but they have of late years been so modified that rust is but little felt or dreaded, and generally the wet dripping season that causes rust is so bountiful in sections not subject to it, that it has ceased to be dreaded to any great extent. Twelve years since we could grow the most productive qualities of wheat, such as Soules, White China, and others, from which forty bushels per acre could with good farming be often obtained. Now, and of late years, we have been compelled to sow such wheat as will ripen in July instead of August, and thereby escape the dreaded ravages of the midge, notwithstanding our certain knowledge that

the crop will not exceed one-half of other varieties. We are now so certain in some sections of destruction by midge to the above best and most productive wheats, that we consider it advisable to throw away one half by sowing unproductive sorts, and thereby secure half a crop.

Canada is in no way to blame for this. When I first came here there was no midge, nor for many years afterwards was the first imported. In many portions of the earlier injured parts of Canada, such as the frontier townships on Lake Ontario, a most sensible decrease in the midge and its ravages is now felt. Many are again growing Soules wheat, and are consequently obtaining once more heavy yields, and no doubt whatever exists that the parasite that Providence usually causes to accompany all such plagues has begun to assert its powers, and that we are feeling the benefits therefrom.

But all these drawbacks are not due to Canada's ceasing to have the power of producing wheat, nor are they due to its so-called rigorous climate. They are more properly due to the importation from other countries, along with emigration, of evils originating and prevailing elsewhere. If we were to take any one township, and average the loss occasioned by the midge, it would be most striking. There are in many townships fully more than five hundred homesteads. On an average, in each township of such a size, there would be grown about fifteen or twenty acres of wheat to each farm. We will say only fifteen acres, which is below the average, and we will take the yield of Soules wheat, or White China, at an average, with good farming, and other advantages, at the old yield of 30 bushels an acre, and compare it with our present yield of spring and various sorts of wheat now sown to escape the midge, at say one-half, or 15 bushels per acre:—

500 homesteads of 15 acres each,	7,500 acres
area of wheat, at 40 bushels per acre,	
old yield, 225,000 bushels, at \$1 per	
bushel.....	\$225,000

for our former yield, at present average prices. This yield could now be easily obtained generally, were it not for the necessity of sowing wheat that will ripen either in July, before the midge can destroy it, or in September, after its ravages are over.

Now, we will just divide the quantity obtained by half, and allow that these wheats are of the same quality with those formerly sown (which is really not the case), and at 15 bushels per acre each township just loses \$112,500, which divided amongst the 500 farmers, would be the snug sum of about \$228 each dead loss by midge alone, as all other expenses are the same. In fact, the real loss would be a great deal more; as, were the \$222 received each year by every farmer in excess of his present receipt's, he would be enabled to add to his farm all the modern improvements and machinery, which in a

few years would enable him by force of capital to add greatly to his producing powers.

The price of labour in Canada can never be much lessened, for the reason so often quoted, and well known, namely, that almost any able bodied man, rather than accept low wages, will go to the woods, and by hard work and some increased privation, for a few years, make a home for himself, and, in addition, lay the foundation of a love of home in the hearts of his sons—and thus the labour of the whole family is lost as labour to those who hire.

It is quite probable that, with the increasing quantity of gold brought into circulation, and the consequent increased value of the bushel of wheat, combined with the certain increased demand from the United States, Canadian produce will in a few years attain a much higher value, whereas the cost of production will continue about the same, or under favourable circumstances of good roads, and increased facilities of culture, may even be lessened to such an extent as to afford better prospects for the Canadian agriculturist. But let not emigrants adopt the erroneous idea that the natural wheat-producing properties of Canada are gradually lessening. The fact is not so, as will be fully proved before the commencement of 1880, when the advance of civilization and means derived therefrom will have more than doubled its present capabilities.

Ditching and Draining.

These important items in farm management cannot be too frequently placed before the farming community. Many are deterred from underdraining on account of the heavy expense, although it may be safely affirmed that the entire expense of underdraining land is always returned to the farmer in the three following crops, and often in the first.

Tiles are, of course, the best means with which to form the water way, but tiles are so expensive that they are comparatively little used. Good serviceable drains can be made either with lumber, sawed for the purpose into five and six inch widths, or even with brush and poles; in either case, however, the expense of the drains is heavy, and what has its effect also, the work is hard and disagreeable, and where the labour of a farm depends on the farmer himself or on the members of his family, it is difficult to get work of that nature performed; then again, to dig drains properly is a trade, and requires considerable experience and special tools, and rather than purchase the necessary tools the farmer often loses ten times the value of them in a single season.

Draining cannot be recommended too strongly, but where draining cannot be done, ditching can, and this is the second best thing. Few farms require ditches of more than two feet deep from the adjoining level, and where ditches are not deeper than that, the entire work can be done with the plough and the

road scraper, thus putting the hard labour on the horses and not on the men, and rendering the task an easy one.

If water is got off the land quickly in the spring when the snows melt, the land is never wet during the subsequent season; whereas, if the winter's rain and snow are allowed to lodge on the ground, and soak away, it puts the crop back for a considerable time, renders the land cold and sour, and throws the earliest and best sown fall wheat into the midge season. Where a field is wet or flat there ought to be a ditch all round it, the earth thrown out by the plough in forming it on one side being made up into a bank for the fence, and on the other, spread over the adjoining land as evenly as possible, and so as to prevent the water from forming a lodgment. For forming such ditches as these, nothing can be better than the plough; nothing moves earth so fast or so cheaply, and by proper management the greatest portion of the earth in the future ditch never requires touching with any other implement. When the earth can no longer be profitably heaved out of the ditch by the plough, that implement should be used, without a mould-board, to loosen the soil, and the earth so moved carried out of the ditch on to the adjoining land with the road scraper. No ditch ought to be of less width at the bottom than the ordinary width of the road scraper; if it is, the poaching of cattle searching for water and treading down the banks, soon fills it up.

Drying and Harvesting Grain and Hay by Artificial Means.

In our favoured climate, there is very little chance of our farmers being driven to use artificial means to dry and cure their hay and grain, but the subject has of late been attracting great attention in Britain generally, where the moist climate and the rains, often through a large portion of the time of harvesting, require some artificial aid in saving the crop.

The British farmer, with his heavy crops of grass, and straw, two, three, and even four times the bulk of our Canadian crops, and the heavy dews of night, the moist climate, and frequent rains, has been forced, even with his cheap labour, to adopt machinery most extensively, both in haying and harvesting. The mowing and reaping machinery of the day is found there on most farms of any importance, and also the various classes of hay tedders; yet with all these aids, wetted and injured hay, and grain which has been put together in so damp a state as to be what we should call seriously "out of condition" when threshed, is the rule, and not, as with us, the exception. No wonder, therefore, that the announcement that both hay and grain may be put in stack safely in so moist a state that ordinarily it would be altogether spoiled, and that from one-fourth to one-half of the harvest and haying labour in such crops could be dispensed

with, has created a good deal of discussion, and attracted much attention.

An inventive genius in England, Mr. Gibbs, some time since proposed to dry all hay and grain in the straw altogether by artificial heat, and it was the publication of his plans that brought out Mr. Neilson and others, in letters which have appeared in various British journals.

The system of Mr. Neilson has been well tried and found successful during a number of years, so it is no new and untried scheme. The system seems to be to make use of the natural heating of the hay and straw, when put together in a damp state, and as it heats to remove what would otherwise become destructive, and possibly cause actual combustion, or at all events mould and mildew, by keeping up for some time a sufficient current of fresh air into and through the body of the stack to remove the moisture, and send it through the body of the stack into the open air. It is a great pity that Mr. Neilson does not give further particulars, such as the length of time he found it necessary to keep the fan at work, the signs by which he ascertained when the air had done what was required of it, the pressure which was generated by the fan in the case in which it runs, and in the wooden pipe leading into the stack, and the expense of the fan and machinery.

The following extract from Mr. Neilson's letter to the London Times will sufficiently explain the method adopted, in the first case with beans, and afterwards with hay and grain:—

I set up a rick of beans in so damp a state that all my servants thought it could not fail of being utterly spoiled. This rick was 20 feet by 15 feet, by 20 feet high, being twice as large as the usual size. Before forming the rick, I placed a wooden trough or pipe 9 inches square inside, extending from one end to the centre, and terminating in an aperture on the upper side 9 inches square. In stacking the beans, I placed a sack filled with straw vertically over the aperture above mentioned, and gradually, as the rick was formed, I kept raising the sack, and forming a chimney of the same diameter, till within about six feet of the top. I then connected a centrifugal fan with the end of the air trough, and had it driven by two men acting on a large pulley from which the motion was connected, by means of a large strap, with a small pulley on the fan shaft. I soon perceived evidences of moisture proceeding from the rick, and in a few days, employing cold air, and with these insufficient means of application, the rick of beans, which it had been predicted would be utterly spoiled, became thoroughly dried, and was threshed out and consumed on the premises. I was thus convinced that the use of artificial currents of air, either cold or by preference heated, would, in the latter case particularly, render the agriculturist nearly independent of weather in harvesting his crops, and I have

acted upon this conviction when needful in my operations ever since the wet harvest of 1863.

This year I formed four ricks of hay, under wooden covers, called Dutch barns, each 24 feet by 16 feet, by 20 feet high, with a wooden air trough running the whole length under them, provided with slides to let on and cut off the passage of air, and each rick having a vertical passage formed as before described. One rick of this hay was mown, tedded, and rolled together by horse labour, put together by hand into large cocks, and on the third day from mowing, without having been previously spread, was carted and stacked. This rick was so out of condition that my bailiff begged me not to let it be stacked, as it must, in his opinion, inevitably take fire. I put up the three other stacks in different stages of condition, but none thoroughly cured. I then applied currents of cold air to the whole by means of a fan driven by a steam engine of one horse power, and the hay in each stack, including the one above specially noticed, became so thoroughly cured that it has sold at the full market price of the day. By these means the four ricks of hay were harvested with less than one-fourth the expenditure for manual labour usually required.

With regard to wheat, it has been customary with me to thresh it by steam power immediately on cutting it from the field, without putting it in ricks. On considering the advantages of this mode of drying, I erected an apparatus consisting of a double cylinder eight feet high, closed at top and bottom, formed of perforated zinc plates, the outer cylinder being eight feet in diameter and the inner one two feet, leaving an annular space of three feet, which contained when filled upwards of two hundred bushels of wheat. I applied, by means of a fan, a current of air warmed by passing over the steam boiler to the inner cylinder, and the air, after passing through the perforations, filtered through the wheat, causing it to be brought quickly into a fit condition for grinding.

Threshing and Cleaning Clover Seed.

Mr. H. M. Thomas, of Brooklin, sends the following communication to *Colman's Rural World*, in answer to the enquiry of a correspondent respecting the method of threshing and cleaning clover seed:—

The Alsike clover bears its seed in its first blossoms each year, consequently, when I wish to save seed, I let the clover stand about two weeks longer than I would for a hay crop alone; then cut, and house it as soon as cured, the same as for hay. About the first of November, so that I can have the hay for winter use, I employ a clover thrasher, of which there are plenty here (they cost about \$120 gold) and thresh it out. They have 50 cents a bushel for threshing it. They will thresh about twenty bushels in a day, and it will be about as clean as

wheat when it comes from the threshing machine. I then run it through my fanning mill, which blows out the dust and fine dirt, but it will still be full of bits of broken hay, and if there are any other seeds in it, they will be there still. I then take a very fine wire sieve, that will, with considerable shaking, let the Alsike seed through, and nothing else. This is the most tedious part to do, as it has to be done by hand, and it is very often dispensed with by farmers when cleaning seed. Red clover, when saved for seed, is managed in the same way, with the exception of the cutting. The red clover bears its seed in the second blossom, consequently it has to be cut for hay early in the season, then allowed to grow up the second time, and when ripe, cut and saved for seed, then threshed, and managed the same as the Alsike. The Alsike will yield from six to eight bushels to the acre—the red clover from four to six.

Red clover, when saved for seed, is worthless for hay, as it becomes dry and black, and when threshed, it all goes to chaff. Such is not the case with the Alsike—its stalks and leaves are as green and fresh after having ripened its seed, as the red clover when cut in its prime; and after it has been threshed it makes as good hay for horses, or stock of any kind, as the red clover at its best. I have not fed two tons of any other hay for the last two years, and for grazing farms it is invaluable, as it does not heave out of the ground with the frost, but will thrive for years on land so wet that other clover would not grow on it. If you have a field seeded down, one half to red clover, the other half to Alsike clover, turn in your stock of horses, cows and hogs, and they will feed on the Alsike as long as they can get a bite, before they will go to the red clover; at least such is the case here in Canada. Parties intending to sow it should be sure to get the large variety, as I am told there is a small kind, quite inferior to the large kind, although I have never had any of it.

Cow-yard Manure.

The *American Stock Journal* has the following in relation to the importance of saving the manure of the cow yard:—

Talk to a farmer about the value of manure, and the importance of collecting and saving it for future use, and he is astonished that any one should suspect that he is not master of that subject, practising it to the last shovelful. Then take a walk with him to his summer cow yard, where the milking is done mornings and evenings, and the lane leading to it, and you will find the droppings of perhaps six months or a year scattered about, trampled into the dust, and partially washed away by the rains, to the amount of cartloads. One cartload of this is worth more than two from the barn yard, as any practical gardener will tell you.

But the farmer looks upon these droppings, many of which are reduced to a powder, as beneath his notice. There is a waste, that might have added ten bushels of wheat to his granary or a ton of hay to his hay mow, if it had been collected every week and properly applied. One hour's labour every week would have saved all this, which would have been worth more in producing crops than a ton of so-called phosphate, at a cost of sixty dollars in cash. These droppings always make their mark when applied to the land—the phosphates not always.

These remarks do not apply to all farmers. There are many honourable exceptions, and their fields show it to their advantage, but there are too many to whom it will apply, and their fields tell a tale too, not much to their credit. We hope some of them will take the hint, and do better in future. Fields are terrible tell-tales.

POTATO POISON.—Sprouts of the potato contain an alkaloid, termed by chemists, *solanine*, which is very poisonous if taken into the system. This does not exist in the tubers, unless they are exposed to the light and air, which sometimes occurs from the accidental removal of the earth in cultivation. A potato that shows a blackish-green tint on one side should never be cooked for the table or fed to stock.—*Artisan*.

British papers speak of considerable damage to the turnip crop by insects in the shape of caterpillars and grubs attacking the root, and aphides in unprecedented abundance feeding on the foliage. Concurrently with this state of things, many parts of the country were visited with legions of lady-birds, the natural destroyers of the aphid. Many people committed wholesale destruction on these unrecognized friends, and thus aided the subsequent devastation of the turnip fields.

EARLY ROSE POTATOES.—Mr. W. Sanderson furnishes the following report on the yield of this variety in the vicinity of Brantford. "Mr. James Grace, of Mount Pleasant, planted nine pounds and received a return of twelve and a half bushels, being over one hundred fold. Mr. James Cowherd, of Newport, planted half a pound and dug eighty pounds and twenty ounces, being over one hundred and sixty fold. Mr. A. B. Bennett planted two small potatoes, weighing six ounces together, and had the extraordinary yield of eighty-nine pounds, being at the rate of two hundred and twenty-seven pounds from one pound. Mr. Charles Dutton had a return of eighty-five pounds from one pound of seed. Mr. Graham, of St. George, had a yield at the rate of one hundred and sixteen pounds from one. The culture was nearly the same in all the above cases—the seed was cut to single eyes and planted in rich and highly cultivated soil. I may state that I could add a number of instances—to those mentioned—of the extraordinary yield of this remarkable potato, having received many letters from correspondents mentioning their wonderful fertility."

The Dairy.

Experiments in Coagulating Milk for Cheesemaking.

Various attempts have been made from time to time to find a substitute for rennet in cheesemaking. Acids have been used for this purpose, and are to some extent employed in Holland at the present time. It is claimed by some that when acids are used for coagulating the milk, a larger per cent. age of curd is obtained, and that the cheese has longer keeping qualities than when rennet is used; but we believe it to be generally conceded that no substance has as yet been found equal to rennet for making a fine delicately flavoured cheese, such as the markets in England now demand.

In regard to the use of acids for coagulating milk, we have some interesting experiments made by an English manufacturer, and detailed by him as follows:

He procured four pints of milk of the same cow, having the specific gravity of 1032; to one, rennet was added in the ordinary manner; to the second, tartaric acid; to the third, acetic acid; and to the fourth, hydrochloric, or muriatic acid.

After the lapse of about half an hour, the curd had formed in the milk to which the rennet had been added. The curd and the whey exhibited to test paper the slightest possible acid reaction, and both were perfectly sweet to the taste; further, it was observed that the curd was very soft, and readily broken up, while the serum or whey was somewhat white and opaque from the retention of a certain amount of the butter of the milk.

For the coagulation of the second pint of milk, thirty-seven grains of tartaric acid were required; the coagulation was effected immediately on the addition of the acid; the whey and curd both exhibited to test paper a strong acid reaction, and were also perceptibly acid to the taste. The curd in this case was firmer, and the whey clean and transparent, almost like water, showing that the whole of the butter had been precipitated with the curd.

No less than 140 drops by measure of the acetic acid, of weight or specific gravity 1046, were necessary to precipitate the whole of the curd contained in the third pint of milk; the curd and whey presented nearly the same character as in the previous case.

Of muriatic acid of specific gravity 1165, seventy-five drops were added before the whole of the curd in the fourth pint of milk was thrown down; the curd and whey were more decidedly acid than in the former cases. In other respects, their characters were nearly the same.

The whey was carefully separated from the curd in each case, when it was ascertained that those curds which had been formed by the addition of the acids were heavier and

more bulky than from the rennet. The curds were then well washed with brine; this occasioned some loss, especially of the rennet curd. The application of the brine was made in order the more completely to separate the whey, rennet, and acids employed in the precipitation of the curds. Lastly, the curds were salted and pressed into small cheeses, those made with the acids being the largest.

For the coagulation, then, of one gallon of milk, no less than five drachms of tartaric acid, or rather more than two and one-fourth ounces of acetic acid, or one and one-fourth ounces of muriatic acid, would be required. The prices of these would be about one half-penny, one penny, and one half-penny sterling, or very nearly in American coin one cent, two cents, and one cent. The cost of these articles, therefore, it is evident, is an important element to be considered.

The cheeses made with the acids were firmer, sharper to the taste, and were of longer keeping qualities than those in the preparation of which rennet was used, but the last was richer and more delicate in flavour.

The advantages of acids over rennet would seem, from these experiments, to be, that the yield of curd is somewhat greater, that their operation is certain, and that the coagulation is effected without loss of time. On the other hand, they are expensive, and the flavour of the cheese is not equal to the standard now set up as *fin* in the English market;—that is, a cheese possessing unimpaired the combined flavour of the casein and butter of the milk.

These experiments, however, may be interesting to cheese manufacturers, and may serve as a basis or guide for future experiments by those who are looking for a substitute for coagulating milk in cheese-making.

We may remark in closing that the acid usually employed by the Dutch for coagulating milk is muriatic acid. Some of the Dutch cheese is excellent, and is highly relished by those who have acquired a taste for this character of cheese.—X. A. Willard in the *Western Rural*.

Keeping Cream.

Next in importance to having the milk perfectly pure and sweet, and freed from all animal odours, comes the matter of keeping the cream after it is taken off the milk. In the first place, the less milk there is with the cream at the time it is set in the cream jar, the better. A great deal of carelessness is shown in this matter, for be it known that milk makes cheese, while cream only makes butter, and the more milk there is in the cream at churning time, the more cheesy-flavoured will be the butter, and therefore the more likely to afterwards spoil unless excessively salted. Really pure good butter requires very little salt, while butter as ordinarily made will soon spoil unless well salted, or kept covered in brine.

Secondly, the cream jar must be of the best quality of stoneware; thick glass would be still better; and it must have a cover that will exclude all dust and insects.

Thirdly, the cream jar should be kept in a place where no noxious odours or gases can be absorbed when the jar is opened to add more cream, and also where the temperature can be kept cool and equable, say at about 60°; and lastly, the cream is to be made into butter as soon as it just begins to sour, and when the jar is emptied it is to be thoroughly cleaned and scalded in boiling water before being again used.

Prize Essay on Cheese as Food.

The American Dairymen's Association offer a prize of \$100 for the best essay on "The claims of cheese as a wholesome, nutritious and economical article of food." No special conditions will be imposed respecting the length of the article. It is designed to make use of the substance of the essay by publication in the next annual report of the Association, by spreading it abroad through the press, and in other ways, so as to lead to the large consumption of cheese as an article of food. Papers on the subject should be sent to the Secretary of the Association, Gardner B. Weeks, Syracuse, N.Y., as early as Dec. 20. The awards will be announced, and the money paid, at the annual Convention, to be held in Utica, Jan. 12th and 13th, 1870.

The Best Time to Skim Milk.

When milk is allowed to sour before it is skimmed, the layer of cream appears more bulky and of greater consistency, but it does not produce so much nor so good a quality of butter as cream properly raised and skimmed from milk before it sours. On this point we possess some interesting experiments by Sannet, who put aside two equal quantities of milk, of which the first, skimmed after thirty hours, yielded thirty pounds of butter; and the second, skimmed after a lapse of sixty hours, only twenty-seven pounds of butter.

In another experiment, two equal quantities of milk yielded—the one when skimmed after thirty hours, thirty-one pounds of butter; and the other, after sixty hours, twenty-nine pounds of butter. In both experiments in which the milk was skimmed after thirty hours' standing, the skim milk was still sweet and the cream not so thick and less in bulk than that thrown up after sixty hours' standing.

The cream which rises first is always richer in butter than that which is thrown up later, and it also possesses more of that peculiar aroma which gives to butter that rich, nutty flavor and smell which impart so high a degree of pleasure in eating it. When proper regard has been had to keeping the milk at the right temperature while the cream is rising, and the proper appliances are had in the dairy, all the cream that will rise at all

will have come to the surface in about twenty-four hours. Some claim that they can get it all up in less time. Of one thing we may be assured—the quicker cream can be made to rise the better the quality; for cream, like all perishable substances, does not preserve its original properties for any great length of time.

The best as well as the highest priced butter that now goes into the London market comes from the continent of Europe, where the greatest attention is paid to butter making. In Holstein, one of the points considered the most essential in butter making is to skim the milk just at the proper moment; and this must always take place before the milk can become sour. Choice, keepable butter can only result when the milk has been kept sweet, as the souring develops curds. The Orange County butter makers observe this principle; and the experience of the best butter makers, both in this country and in Europe, appears to have settled down upon this principle as the correct one to practise. But while the cream should be taken from the milk before it is sour, the cream, on the contrary, is allowed to have a pleasant acid taste before churning.

It appears to be the general opinion of butter makers, both in this country and in Europe, that better results are obtained by allowing the cream to acquire a slightly acid taste than to churn it sweet; but this acid condition of the cream must not be confounded, however, with sourness, which is altogether different, and arises from different causes, such as standing too long, or from a close atmosphere, or from badly cleaned utensils, or from a general want of care and cleanliness.—X. A. Willard, in *Western Rural*.

Fall Pasturing Milch Cows.

Every good dairyman knows that fall feed from pastures is poor stuff, after being frosted, for making milk and butter from, yet a great many will keep their cows on such pasture till late in the season, perhaps giving them a feed of hay, pumpkins or the like, once a day.

A better way, and one which will keep the cows giving good, rich milk, that will make nice, yellow June butter, is to sow a piece of rye in August or early in September, especially for pasturing the milch cows on in late fall.

Prepare the ground by thorough ploughing, and spread on six or eight loads of compost or its equivalent, harrow it in well, sowing on one bushel to one and a half of seed, and after a few weeks you will have a nice pasture, which will hold fresh and green till snow blows, unless fed too close, and next spring you will have a fair crop to turn under to enrich your land and grow a good crop of any kind of corn, potatoes, &c.

Such a patch will furnish a bite for calves or sheep during winter if needed, when the ground is bare of snow, and if not fed too close it will give a fair yield of grain next summer, if desired.—Ez.

Stock Department.

Louden Duke.

The accompanying illustration is a portrait, by Mr. Page, of Mr. Snell's short-horn bull, Louden Duke, the winner of the sweepstakes prize at the late Provincial show at London for the best bull of any age. This fine animal was bred by Abraham Renick, of Clarke county, Kentucky, an old and successful breeder, and imported to Canada in November, 1866, by Mr. John Snell, since which time he has made himself a good reputation in this country by winning the fol-

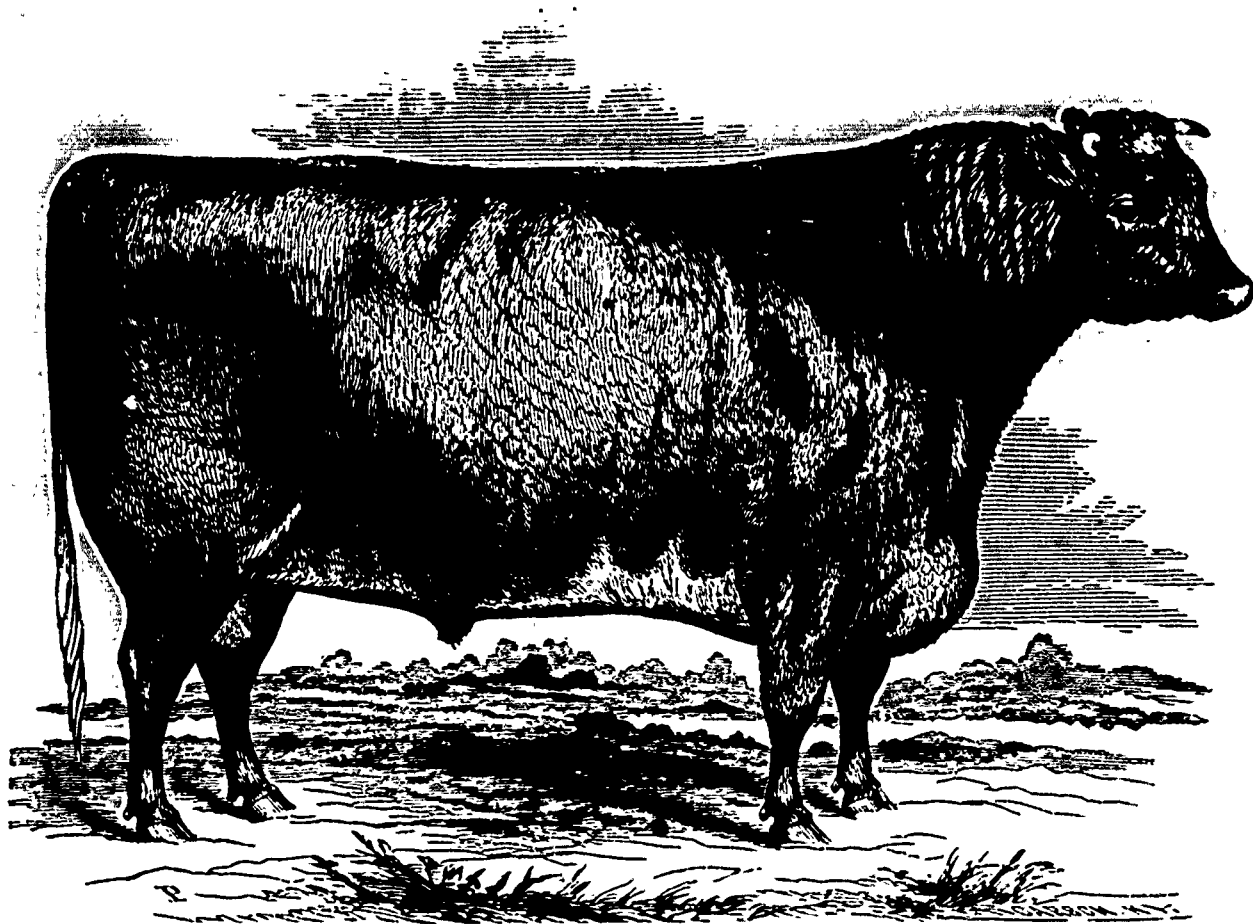
LOUDEM DUKE [104].

RED AND WHITE; Calved 11th March, 1866; Bred by Abraham Renick, Clarke Co., Kentucky, the property of John Snell, Edmonton, Ont.

Got by Duke of Marlborough..... 3866.

Dam Mayflower 3rd.....	by Airdrie	2175,
" Mayflower.....	by Gen Winfield Scott.....	530,
" Dorothy.....	by Prince Charles 2nd.....	561,
" Thames.....	by Shakespeare	961,
" Lady of the Lake.....	by Reformer.....	(2595)
" Imp Rose of Sharon.....	by Belvidero.....	(1706)
" Red Rose 5th.....	by 2nd Hubback.....	(1423)
" Red Rose 2nd.....	by His Grace	(311)
" Red Rose 1st.....	by Yarborough	(705)
" The American Cow.....	by Favourite.....	(252)
"	by Punch.....	(531)
"	by Foljambe.....	(263)
"	by Hubback.....	(3191)
"	by J. Brown's Red Bull.....	(97)

died in 1867, a few days after calving, This cow, Sanspareil, was of pure Bates blood, and her descendants, mostly roan in colour, inherit the large frame and good milking properties of the Bates blood, which keeps them in less showy condition than is usual with short-horns. Isabella 2nd, a beautiful red and white cow, bred by S. E. Boldon, Esq., Lancaster, England, got by Buccaneer (11217) from Isabella Howard. She is of nearly pure Booth blood, being directly descended from the celebrated cow Isabella, by Pilot (496), and comes of a strain that has remained very much in the hands of the Booths at Warlaby since



Short-Horn Bull "LOUDEM DUKE," the property of JOHN SNELL, Esq.

lowing prizes, namely: 1st prize as a yearling at Kingston, 1867; 1st prize as a two year old at Hamilton, 1868, 1st prize at London, 1869, as a three year old, and sweepstakes for best Durham bull of any age. He also stood at the head of the herd of short-horns which won the Prince of Wales' prize of £50 at London.

We give his pedigree annexed in full, from which it will be seen that he is deeply bred in Bates blood, his sire being got by Louden Duke 3097, and he by imported Duke of Airdrie (12739). His grandsire was also by imported Duke of Airdrie, and on his dam's side the pedigree runs back to four or five cows bred by Mr Bates

Notes on Canadian Herds

NO. 5.

THE MORETON LODGE SHORT HORNS.

In the years 1854-'5 & '6, F. W. Stone, Esq., Moreton Lodge, Guelph, laid the foundation of one of the finest herds of short-horns ever got together in America, with some choice animals, selected from the best herds in England. Out of several strains of blood then imported, the progeny of three cows seem to have become especial favourites with Mr. Stone, viz., Sanspareil, a roan cow, bred by Colonel Kingscote, Gloucestershire, in 1853, got by Gauntlet (10260) from Serenade. She

the commencement of that famous herd. This cow is still at Moreton Lodge, and though now fifteen years of age, has bred regularly, and is now again in calf. The Isabellas are shorter-legged, and more squarely and finely-made than the Sanspareils, with solid heavy flesh, and good feeders, with strong constitutions, mostly red in colour, and seemingly more adapted to make beef than milk. They make fine show animals, with very little extra feeding. The other, Eugenie, by the celebrated bull Grand Turk (12969), a rich roan, bred by Mr. Ambler, of Watkinson Hall, near Halifax, Yorkshire, England, imported in 1856, then in calf to the bull King Arthur (13110), and brought in

December of same year, a red bull calf, Third Grand Duke (17993), which was the winner of so many prizes, and the sire of the now celebrated prize taking bull Grand Duke of Moreton, 5732. Grand Duke of Oxford 5733, and the Knight of Canada, 6243, the stock bulls at present in use at Moreton Lodge. The Duchess of York tribe is also descended from Eugenie, by the Oxford bulls.

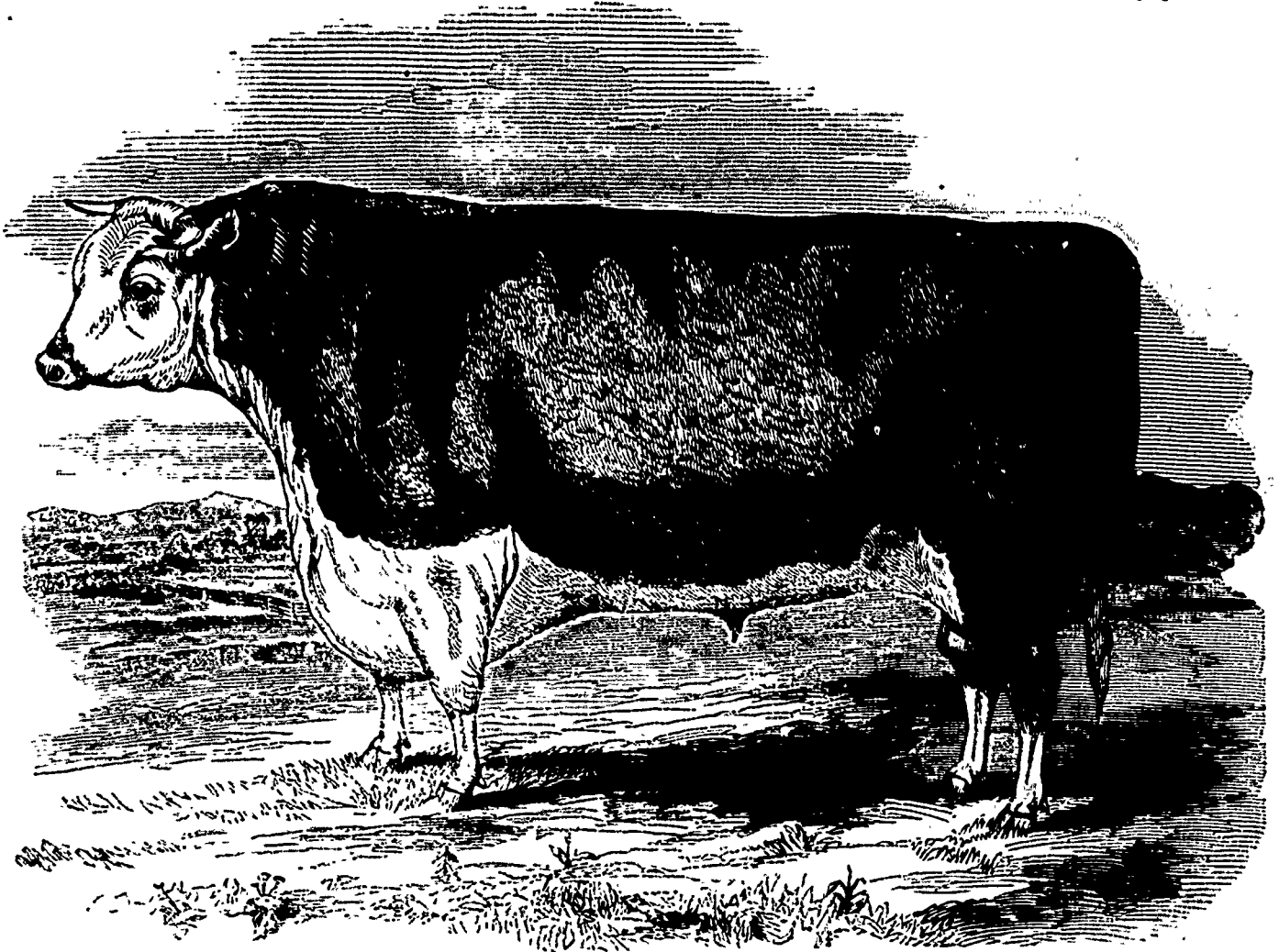
The oldest cow now in the herd is Cherry Pie, a light roan, bred by Jonas Webb, of Brabraham. She is by Lord of the North (11743) from Celia. She has bred

imported by Mr. Stone in 1856, is a fine showy cow. She is a good milker, and the dam of that fine prize-taking bull, Grand Duke of Moreton.

Sanspareil 3rd, roan, 11 years, by Friar John (12905) from imported Sanspareil, has been a regular breeder, and the mother of several fine Sanspareil heifers. She is now in low condition, having had a calf at her side all summer. She is of pure Bates blood. Sanspareil 6th, rich roan, nine years, by 3rd Grand Duke (17993) from Sanspareil 3rd, is a very large, fine cow, soon to drop a calf to

to drop a calf to Grand Duke of Moreton; she is of Bates blood. Sanspareil 16th, red, is a neat little heifer calf from Sanspareil 6th, by Sir Giles, 6182, a bull bred by Mr. S. Thorne, and got by 6th Duke of Thornedale.

Isabella 8th, roan, seven years, by Windsor [811] from Isabella 4th, is a fine heavy fleshed cow, that has taken several prizes at Provincial shows. She is now in good condition, though a regular breeder. Isabella 10th, roan, six years, a full sister to Isabella 8th, is a grand cow, that has taken many prizes. She



Hereford Bull, "SIR BENJAMIN," Bred by F. W. STONE, Esq.

nine calves since Mr. Stone got her, the last being Cambridge 8th, calved in 1866. She is now being fed in order to make into Christmas beef. From her descend all the Cambridge family.

Another old cow, also being fed to make into beef, is Goldfinder 2nd, by President, 2049, from imported Goldfinder. She is a spotted roan cow of great size, and depth of carcass, though not of very handsome appearance.

Maid of Guelph, roan, nine years old, by 12th Duke of Oxford (17742) from Martha, a cow bred by Mr. Smythe Owen, of Condover Hall, England, and

Grand Duke of Oxford. Sanspareil 14th, red, three years, by Grand Duke of Moreton from Sanspareil 12th, a large short-legged young cow, had her first calf to Grand Duke of Moreton on January 7th last, a bull, 6th Grand Duke of Moreton, which was taken to the London Exhibition, and there sold to Hon. John Simpson, of Bowmanville, for \$300. Sanspareil 15th, red, two years, by Grand Duke of Moreton, from Sanspareil 12th, is a fine thrifty-looking heifer, with rather large head. Sanspareil 12th, red, five years, by Prince of Wales [579] from Sanspareil 6th, deep-bodied cow, is soon

seems to be the best short-horn cow on the farm. She has a roan bull calf, Duke of Edinburgh, to Grand Duke of Moreton, a little fellow of fine form and solid substance, that bids fair to make a good record for himself, at some future time. Isabella 12th, red and white, four and a half years, by The Moreton Duke [742] from Isabella 4th, is a really splendid cow, with good head and fore quarters, and well filled out ribs, though her thighs and twist are somewhat deficient. She has already bred four calves, and though now suckling twins, is in fine condition. Isabella 14th, red and white,

four years, by 12th Duke of Northumberland [196] from Isabella 2nd. She is rather small. Isabella 15th, spotted roan, two and a half years, by 12th Duke of Northumberland from Isabella 4th, is a fine large heifer, that will make a very large, heavy cow. Isabellas 17th and 18th are both red, twin calves, by Grand Duke of Moreton from Isabella 12th. They are very fine ones indeed. Isabella 19th, red with some white, by 12th Duke of Northumberland from Isabella 2nd, is the youngest of that tribe at the farm, and promises well.

Duchess of York 3rd, red roan, four years, by Moreton Duke from Duchess of York, is a nice cow, in good flesh, showing strongly the traits of the Duchess blood, of which she has 13-16ths. Duchess of York 5th, white, 3 years, by 12th Duke of Northumberland from Duchess of York 2nd, seems to be a very neatly made animal with good fore quarters. She is suckling her first calf, a roan bull to 5th Grand Duke of Moreton, by Grand Duke of Moreton. Duchess of York 6th, roan, two years, from Duchess of York 3rd, by Grand Duke of Moreton. Her sire gives a cross of Booth on the Duchess blood. She is a handsome, long-bodied, solidly built heifer, that bids fair to become a large showy cow. Cambridge 8th, red and white, three years, by Grand Duke of Moreton from Cherry Pie, has her first calf, a red bull, 2nd Grand Duke of Oxford, to Grand Duke of Oxford [225]. This seems to be the neatest young cow in the herd, though in low condition from suckling her calf all summer. Cambridge 9th, roan, three years, by Grand Duke of Moreton, from Cambridge 2nd. She is a short-legged, square-built cow, with dished face and short neck. Cambridge 10th, red, two years, by 3rd Grand Duke, from Cambridge 2nd, is a very fine, evenly-made, sweet-looking heifer, that took the second prize at London this year. Marchioness of Gloster 4th, red and white, four years, by the Moreton Duke, from Marchioness of Gloster, is a small, neat cow, in low condition, from suckling her calf, a red bull, Northern Star, by Knight of Canada. Miss Margaret 4th, roan, three years, by 12th Duke of Northumberland from Miss Margaret. This is a splendid heifer, that took the second prize at London this year in the two-year old class, and full sister to Miss Margaret 5th, the heifer calf that took the first prize at London. Miss Margaret 5th seems the best heifer calf in the herd, and has a wonderfully broad fore quarter, chest, and deep body, promising to be-

come a fine show cow some day. The progenitor of these last three was the cow, Margaret, by Snowball (8602), imported by Mr. Stone in 1855. Morning Glory, red and white, by 3rd Grand Duke, from Mermaid, a daughter of Maid of Guelph, is a very large, fine animal for her age, twenty months, and if she fills out as well as present promise indicates, she will be the coming show heifer of 1870.

Of the bulls over one year there now remain at the farm Grand Duke of Moreton, 5732, red, now nearly six years of age. He is by 3rd Grand Duke from Maid of Guelph, and has been much used by Mr. Stone in his herd. He is still a noble beast, 5-8ths Booth, with the large head and fine shoulders of the Booth blood, and presents a fine profile from the front. Had he not been lamed by getting a stone in his foot just before the London exhibition, he would have been shown there, and have carried off the red card. Grand Duke of Oxford, 5733, roan, four years, got by 3rd Grand Duke, 2292, from 3rd Duchess of Oxford, is another sire bull that has been considerably used. He is a heavy-fleshed, large-framed animal, though not in sufficiently high condition for a show bull. 2nd Duke of Clarence, a two-year old roan, by Grand Duke of Moreton, from Sanspareil 3rd, is a good bull, made up from both Bates and Booth blood. His Majesty, a three year old, red, from Isabella 4th, by 12th Duke of Northumberland, does not show the fine points of his dam. Grand Duke of Cambridge, red with some white, 18 months old, by Grand Duke of Moreton from Cambridge 6th, is a most promising young fellow, and evidently the best of the bulls descended from Cherry Pie. Knight of Canada, a four-year old dark red bull, by 3rd Grand Duke from Isabella 5th, having 5-8ths Booth blood in him, seemed to fit to be the premium bull of the herd. His face is of rather too dark a red, but he has a very full, long body, with smooth, glossy coat of hair, and neat hind quarters. His head and fore quarters show strongly the character of the Booth blood.

Altogether, there were forty-four pure short-horns in the herd at the time of our visit, but some of them we did not notice, and some younger ones had not been named. Several very fine grade cows are to be seen that are kept for their milk.

Mr. Stone has imported and bred more short-horns than any man in Canada, having in 1853 brought over some cows from the States, and a red and white bull, John o'Gaunt 2nd, from England, bred by Mr. J. S. Tanqueray,

Hendon, Middlesex, England. This bull belonged to the Gwynne family. In 1855 and 1856 Mr. Stone imported several fine cows from the herds of such noted English breeders as Colonel Kingscote, Gloucestershire, Jonas Webb, Brabraham; Edward Bowly, Siddington, Mr. Morton, Skelsmeigh Hall, J. E. Bolden, Mr. Ambler and others, Lancaster, and a red bull, Friar John, son of the Duke of Gloster (11382) from Mr. J. S. Tanqueray. Up to the end of 1865 Mr. Stone had bred fifty-six bulls and sixty-nine cows, that are entered in the first volume of the Canadian Herd Book, besides a great many since. Most of the bulls and several of the cows have already passed into other hands, and helped much to make Wellington county famous for its good stock and for producing the best beef that comes to our markets.

HEREFORDS.

In 1860 & 61, Mr. Stone imported some choice specimens of this breed of cattle from the herds of Lord Bateman and Lord Beswick, most noted English breeders of Herefords, and he now possesses a herd of forty-seven as fine animals, individually and collectively, as can be found anywhere in America. Of the original imported stock several cows yet remain, namely, Hebe, bred by Lord Bateman, a cow that took the first prize as a yearling at the Canterbury meeting of the Royal Agricultural Society in 1860. She is a splendid cow, and though eleven years old, is in such high condition that she seems a solid mass of flesh and fat. Baroness, by Carlisle from Little Beauty, also a Bateman cow, now twelve years old, is a capital milker and in fine condition, though suckling her calf. Bonny Lass, another Bateman cow, full sister to Baroness, is a really splendid animal, that has never been beaten in the show yard. Verbena, ten years, by Carlisle, from Flower, is another fine Bateman bred cow. Peach, nine years, by Albert Edward (869) from Cherry 13th, a cow bred by Lord Beswick, is in a high condition, though on short pasture, with a calf at her side. Graceful, by Severn (1382) from Lady, is a light-coloured cow bred by Lord Berwick. She seems to be the finest cow in the herd, and is very full fleshed and solid, though a regular breeder and good milker. She is the mother of Sir Benjamin by Guelph, the best bull ever bred by Mr. Stone. The bull Guelph (2023) by Patriot (2150), from Hobe, is the one Mr. Stone has principally used. He was considered the most perfectly handsome bull ever shown at our Provincial exhibitions, and never

failed to win the red card. He was sold in September last to a gentleman in Ohio, U.S.

Of the cows and heifers bred on the farm we saw *Bonny Lass 2nd*, by Patriot from *Bonny Lass*. *Bonny Lass 5th*, by Patriot from *Bonny Lass 2nd*. *Graceful 2nd*, by Patriot from *Graceful*, a very fine cow in high condition, though with a young calf at her side. *Vanquish*, by Patriot from *Verbena*. *Vesta 3rd*, by Patriot from *Vesta 2nd*. The bull Patriot was imported at the same time as the older cows. *Hebe 3rd*, by Sailor (2200) from *Hebe*. She is a cross between the *Bateman* and *Berwick* blood, and shows good style, though not as heavy fleshed as some of the others. *Vesta 4th*, by Sailor from *Vesta 3rd*, is a very fine two year old heifer, combining both good style and heavy flesh, and showing the best points of the breed to advantage. *Gentle 2nd*, by *Golden Horn (2015)* from imported cow *Gentle*, is a light coloured, full fleshed cow of neat appearance. *Gentle 6th*, by Sailor from *Gentle 3rd*, is a rather small cow. *Sweetheart 2nd*, by Guelph, from imported cow *Sweetheart*, is a dark, solid fleshed cow, that has bred regularly since two years old. *Sweetheart 3rd*, by Guelph from *Sweetheart*, is a very fine three year old, in high condition. *Sweetheart 5th*, by *Moreton Hero* from *Sweetheart 3rd*, is a fine heifer calf that already shows neat form and good feeding quality, being quite fat. *Princess 3rd*, by Sailor from *Princess 2nd*, is a fine two year old. *Princess 4th*, by *Moreton Hero* from *Princess 2nd*, *Baroness 7th*, by Guelph from *Baroness*, *Vesta 5th*, by Guelph from *Vesta 3rd*, *Gentle 12th*, by *Moreton Hero* from *Gentle 2nd*, together with some younger ones not named, are as fine a lot of heifer calves as one can wish to see.

Moreton Hero, by *Canadian Chief (2441)*, from *Vesta 3rd*, is a small bull for his age, but with good style and symmetry. *Commander-in-chief*, by Guelph from *Bonny Lass*, twenty months old, is a remarkably fine young bull, and promises to be the equal of his sire. *Sailor Prince*, 2½ years, by Sailor from *Peach*, is another very fine one. *Sir Charles*, 2½ years, by Guelph from *Graceful*, and full brother to *Sir Benjamin*, is a most noble specimen of the breed, that cannot for size, style and symmetry together, be beaten by any bull in America. He is the most perfect beau ideal of a full fleshed, quick feeder, we have ever seen. In colour he is particularly rich and handsome, the white being clear and distinct and the red rich and dark. His coat is

as glossy as that of a racehorse. Owing to the want of demand for bulls of this breed, two of the bull calves have been made into steers for beef, but one very fine one, named *Sir James*, full brother to *Sir Charles*, and two others have been reserved. The Herefords make famous beef animals, either pure or crossed on native stock, and two crosses of a pure bull on a native will bring out an animal showing all the fine points of the breed both in quality and colour. They are perfectly hardy, remarkably quick feeders, arriving early at maturity, and giving a smaller offal than any other breed. The cows, though not deep milkers, give milk of a very rich quality, as is shown by the fact that the calves are always fat, without any extra feeding, as required by the short-horns. They make famous grazing beasts, as they fatten on grass where a short-horn would starve, and, according to Mr. Stone, cost fully one-third less to keep than the short-horns. Many fine animals from Mr. Stone's herd have gone to Maine, Michigan and Quebec, where their good qualities are beginning to be found out; but the prejudice here runs so strongly in favour of the short-horns, that few of our farmers have yet tried the much-needed experiment of introducing the Hereford blood among their neat stock. Their virtues will not, however, long remain unknown, and they will yet be found more profitable to keep than the more fashionable and costly short-horns.

Hereford Bull Sir Benjamin.

As an appropriate accompaniment to the foregoing account of Mr. F. W. Stone's herd of cattle, we give a portrait of the Hereford bull Sir Benjamin. The engraving finely illustrates the general form and distinctive points of the breed, as contrasted with the Short-horns, of which a noble specimen appears on the other page. Sir Benjamin was bred by Mr. F. W. Stone, of Guelph, and was sold by him last year to Mr. Perdue, of Chinguacousy. He is by Guelph (2023) from *Graceful*, a cow bred by Lord Beswick, and may be justly claimed as the most perfect specimen of the breed ever raised in Canada. His portrait, taken by Mr. Page, forms the frontispiece to the first volume of the *American Hereford Herd Book*, recently published under the supervision of Mr. Sandford Howard.

A valuable trotting horse, "Tom Thumb," belonging to Mr. P. Wakoff, London, died recently from the effects of a surgical operation on the throat.

Economy in Keeping Different Breeds of Pigs.

Some years ago I had a great fancy for large hogs, such as would make at two years old about 300 to 350 and sometimes 400 lbs. of meat. I kept careful accounts, and found that I could sell the food, and the hogs, before fattening them, for more money than they would bring when fatted. I therefore concluded that something must be done to amend this, or I must abandon fattening hogs, a conclusion to which I was reluctant to come, if for no other reason, on account of the importance of the manure, which was too valuable to lose. A friend, to whom I had rendered some service in his need, wishing to make me a present, begged my acceptance of a young Berkshire boar, of the small hairy breed. I took him home in a bag, and after some weeks, seeing how well and fat he kept when running with the rest, which were all poor as racks, I determined to get into the small breeds altogether, and procured some well-bred sows, and for two or three years I raised some of the best hogs in my part of the country. I gave some time to constructing a good warm house, or rather nest, some little distance away from where they were fed, and kept an accurate account of the cost of feeding, and found that there was really a good profit attached to them. Last year I ran short of feed, and having previously fenced off about two acres of land, well supplied with water from a well, (and on which I had previously sowed ten pounds of clover an acre, which yielded a most plentiful crop), I turned in the Berkshires, having constructed an excellent house, perfectly dry and warm and well supplied with bedding.

It is a great mistake to suppose that pigs in summer want no bed or house to lie warm and dry. They will not thrive without it, especially if their food be, as in my case, altogether clover and water. The pigs grew and thrived well, so well indeed that the Americans gave me \$112 for thirteen, all of them about nine months old. I had still two sows to have pigs, and in July they had fourteen handsome young ones, about a month or six weeks old at harvest. I never fed those until about December last year, and then only once a day with peas, and not many even then. The exact quantity I do not know, as the memorandum is mislaid, but I know I again sold, in the last of January, the whole lot, but one, (a special beauty) for seven dollars each, and they were not more than eight months old, I fatted some five or six of the same breed and age for farm use, and they attained about 200 lbs each, and with only about four bushels of peas each, but boiled, as I always do, into pea soup; the peas go nearly twice as far as if fed whole and dry. If any one doubts this, let them take some of the manure made from peas fed whole and dry, and leach it out in water, and they will at once see that the principal part consists of pieces of un-masticated peas, which

it is evident could not have yielded any nourishment to the animal. I have now two acres of clover, well seeded down, and well fenced, and a good permanent summer house on it, and find that it costs almost nothing to keep a large drove of Berkshires through the summer until harvest, and after pea and wheat stubbles are picked clean, the pigs are so fat as to require but little more feed to make them fit for market. I also find it very bad economy to defer fattening the pigs until cold weather sets in. Pigs fatted and killed in the early part of November are worth more, and will feed with much less, than if feeding is deferred until December or January. C.

Stock Sale

Mr. Joseph Kirby, E-quesing, near Milton, held a sale of stock on Oct. 1st. The day was fine and attendance fair, mostly neighbouring farmers, but the bidding was very slow. About sixty Leicester and Cotswold rams and ewes were offered, and all but half a dozen sold. Rams went at from \$16 to \$14 dollars each. Ram lambs \$40 to \$10 each. Leicester ewes \$37 to \$27 per pair. Ewe lambs \$37 to \$12 per pair. Cotswold ewe lambs \$33 to \$18 per pair. The following shorthorns were sold:—Red bull calf, Derby, to E. Loree, \$100. Roan bull calf Gladstone, J. S. Smith, \$95. Red-and-white heifer calf Isadore, J. H. Loree, \$50. Red heifer calf Rosetta, D. Stirton, \$61. Roan heifer calf Gay Lady, J. Martin, \$51.

The cattle sold were too young to bring anything like a big price, but we understand Mr. Kirby intends selling off the whole of his herd of shorthorns by auction, without reserve, on the 28th November.

The Kelso Ram Sale.

The annual sale of Leicester rams at Kelso, which always attracts a large number of stockmasters, not only from England, but also from the United States and Canada, took place during the second week in September. From a report in a Scotch paper, kindly furnished by a correspondent, we learn that very high prices were realized for some of the animals. The most noticeable among the lots were the Mertoun (Lord Polworth's), and the Mellendean Rams (Miss Stark's), which have long been leading breeds among Leicester sheep. The highest price reached by any single ram was obtained by one of the Mellendean lot, £192. The only approach to this was last year, when one of Lord Polworth's brought £105. The second place in regard to price at the sale of the present year was gained by Mr. Foster, of Ellingham, one of whose rams fetched £59. Lord Polworth's highest price this year was £12. The average prices were, of the Mellendean rams, £16 2s. 4d.; Mr. Foster's, £15 8s. 3d.; and Lord Polworth's, £15 0s. 5d. The number of entries, though very large, 1751, was less than in any year since 1860, and the average price was also below the average of recent years.

Veterinary Department.

Injuries to the Horse's Foot

The foot is frequently injured by a horse picking up a nail in travelling, or from a piece of glass or other hard body entering the sole or frog, and penetrating to the sensitive parts. The danger to be apprehended from these injuries will greatly depend on the situation of the puncture. If penetrating deeply, and close to the coffin joint, it is often attended with very serious results. Acute inflammatory action takes place in the joint, and this gives rise to severe constitutional symptoms. Whenever the sensitive structures are injured the horse shows lameness, which gradually increases, and matter soon forms, causing great pain. The horse, when standing, keeps his heel off the ground, and knuckles over at the fetlock. If the hoof is pinched or struck with a hammer, he instantly evinces pain. These symptoms may be produced without the substance being lodged in the sensitive parts, and they also frequently follow in cases where the nail or other offending body has been removed, and the sole not thinned properly. Therefore, in all such injuries it is advisable to remove the shoe, and thin the sole around the injured part. If matter has formed, it must have free exit, or sinuses will form, which frequently prove incurable. Poultices should be applied until the pain and fever are completely subdued. When proud flesh sprouts up, mild caustics should be applied, as the chloride of antimony. In all cases where the sole becomes undermined or detached, the knife must be freely used. The after treatment consists in shoeing properly, and using a leather sole, with stuffing, to protect the injured and weakened parts.

Corns in Horses.

Corns are a common affection of the horse's foot, and consist in a bruise of the sensitive sole in the angle of the heel, between that part of the hoof called the bars, and the lining of the coffin bone. The name by which this disease is known is derived from the painful indurated growths called corns, so common in the human being. Both are produced by pressure; but a corn in the human being and a corn in the horse's foot are entirely different in their nature. In the former it is an organic structure, whilst in the latter it is simply a bruise. When a bruise occurs to the sensitive sole, blood is extravasated into the horny sole, giving rise to that reddish brown appearance which is known as a corn. There are some horses exceedingly liable to have corns, such as horses with broad flat feet and weak heels. It is almost impossible

to drive them for any length of time upon hard roads without producing corns.

This affection is easily detected, and frequently produces lameness. The symptoms are well marked. The horse is observed to step a little tenderly, and he inclines to point his foot when standing. If both feet are affected, he keeps pointing first with the one foot, then with the other; and when trotted out he goes lame, the lameness being greatly increased when he is made to trot upon a hard road. Frequently the inflammatory action is so great as to run on to the suppurative process, when the pain is greatly increased, and as a matter of course, the horse becomes exceedingly lame; he can scarcely put his foot to the ground, the skin immediately above the hoof is very hot, and if the ball is struck with any hard substance he at once suffers pain, and suddenly jerks up the foot. He will also stand knuckling over at the fetlock joint, and this symptom sometimes misleads as to the true seat of the disease.

The great exciting causes of corns are hark work and bad shoeing. When horses are kept constantly on the farm, or on the soft roads, it matters comparatively little how they are shod; but when subjected to a drive upon macadamized roads, with the shoe pressing upon the heels, corns are the result. A drive of ten miles will frequently produce a bruise that will turn out a very troublesome corn.

Foot Disease.

To the Editor.

Sir.—A new disease has manifested itself in this and the adjoining townships among the horned cattle. My object in writing is to state, as nearly as possible, the symptoms, in order to learn the experience of those who may be familiar with its development in other sections of the country, hoping thereby to find some remedy. Some farmers already have as many as twenty head affected; and only about a week has elapsed since it was first noticed; and some of those first attacked are apparently beyond hope. The symptoms are briefly as follows: The first appearance is an eruption on the back part of the fore leg, just above the foot, and resembles the scratches or grease on horses. At first it can only be detected by a roughness beneath the hair; this gradually increases until sores or scabs are formed. Suppuration ensues, and the disease extends upwards to the body. The morbid action now goes on quickly, and to all appearance the joints will actually rot off. As yet the creature seems to be in good health and appetite, only becoming emaciated when crippled so as to be unable to procure its own food. Will some of your correspondents tell us what

to do in order that a very great calamity may be averted?

EDMUND YEIGH.

Barford, Oct. 6th, 1869.

Ans.—The symptoms above referred to are somewhat similar to the symptoms of a disease called Epizootic Aphtha, which is common in many parts of Britain. Professor Simonds, of London, names this disease Epizootic Eczema, and it is also called the foot and mouth disease, and at the present time large herds of cattle in England are affected with this complaint. It is believed to be communicated from one animal to another, and, of course, is a contagious disease, and often proves troublesome, especially amongst dairy stock, by producing a debilitated state of the system, and by arresting the secretion of milk. It is not a very fatal complaint. In addition to the feet and limbs being affected, the teats and mouth are also in an irritable condition. If closely examined, an eruption may be observed which consists of many vesicles raised on the inflamed skin or mucous membrane. None of these symptoms are alluded to by our correspondent, and the cases which he notices may be rheumatism or rheumatic inflammation of the joints, in which the joints swell and become stiff and painful, structural changes occur in the joint, which frequently lead to the formation of abscesses, which burst and discharge matter freely.

In the treatment of the cases mentioned by Mr. Yeigh, we strongly advise isolation. Place the diseased animals some distance from the healthy, foment the limbs, and apply twice a day a solution of carbolic acid, about one part of carbolic acid to forty or fifty parts of water. Give a small dose of laxative medicine, about four ounces of epsom salts dissolved in a quart of water, and be sure to allow a regular though moderate supply of common salt. A mild treatment with soft and laxative food has found most favour in England.

The foot and mouth disease is still spreading over many parts of England, and reports from the continent state that it exists to an unusual extent among cattle and sheep in various parts of Prussia, Holstein, Schleswig, and also in Switzerland.

VETERINARY INTELLIGENCE.—We learn that Mr. G. W. Thomas, one of the licentiates of the Ontario Veterinary College, who has for some time been practising the profession in Owen Sound, has removed to the more populous neighbourhood of Guelph. The Veterinary College is yearly sending out a number of well qualified practitioners, whose services will be invaluable to the country, and the farming community in particular. The winter course of instruction has now again commenced in this city, a new building is in course of erection for the use of the school, and it is expected to be ready for occupation by January next.

Horticulture.

EDITOR—D. W. BEADLE,

CORRESPONDING MEMBER OF THE ROYAL HORTICULTURAL SOCIETY, ENGLAND.

Autumn Meeting of the Fruit Growers' Association.

The Fruit Growers' Association of Ontario held their regular autumn meeting in the Town Hall, Brantford, on the 7th October, —the President, the Rev. Mr. Burnet, in the chair.

The Secretary, Mr. D. W. Beadle, read the minutes of the previous meeting of the Association in London.

The minutes and resolutions were confirmed.

Mr. Arnold and Mr. Leslie were appointed a committee on apples; Mr. Holton and Mr. Wolverton on pears; Mr. Saunders and Mr. Mills on grapes and other fruit, to examine and report.

The President then proposed the discussion of the first question, namely, The benefits of planting trees for shelter, and the propriety of offering a prize therefor.

Mr. Saunders stated that he had no experience, but he had planted a number this year, and would be able in a few years to have something to say in the matter.

Mr. W. H. Mills, of Hamilton, had planted shade trees on his place, and found that he could plant fruit trees successfully where they would not thrive before. He attributed this result to the shade-trees protecting the tender fruit trees from the wind.

Mr. Bennett corroborated the last speaker with respect to grapes, and approved highly of trees for shelter.

Mr. Russel Smith thought they were an advantage to fruit trees and vines.

Mr. Wolverton spoke favourably, as far as his experience, which was limited to hedges, went.

Mr. Aaron Slatt, of Waterford, lives in a comparatively new country, with many forest trees; thought wind and storm very disastrous to fruit trees, especially peaches, unless sheltered; strongly recommended a large portion of pine trees as a protection, evergreens sheltering in winter as well as summer; suggested the propriety of planting fruit trees more closely, and recommended a prize for the best essay on the subject.

Mr. Hamilton thought trees a great protection, provided they are not too near. In that case he considered them a detriment; thought east worse than north wind.

Mr. W. A. Smith had planted a hedge on the north-west side, which he considered a benefit.

Mr. John Hatch, Woodstock, thought fruit trees, as well as cattle, required protection.

Mr. Moyle said that his children planted peach trees under some vines, and they have

done better than any others: they survived the winter better, and he strongly advised protection to them.

Mr. Chisholm has an orchard well protected by forest trees; his neighbours complain of their fruit being blown off, while he cannot complain on that score. He has never planted trees for shelter, owing to a sufficiency of natural forest.

Mr. Ball said there could be but one opinion as to the planting trees on east, west or north sides, but vines did not require to have trees on the south; suggested legislation to restrain persons from cutting down all the trees on their farms; thought pine and other evergreens made good shelter and grow well; the yellow locust is very good; planted his trees two deep and not too closely; transplanted his evergreens in May or early in June.

Mr. Wolverton did not approve of the locust, as being liable to the borer.

Mr. Holton thought shelter desirable to fruits, likes the white cedar, but had had no extended experience.

Mr. Bauer disapproved of the locust, but approved of the maple.

Mr. Hart suggested cedar or pine as shelter; thought the winter hurt trees more than the summer.

The President spoke of Lombardy poplars as being used in France for shelter. They diverted winds to the higher strata of air, and were close in their foliage. He suggested a prize either for the best essay on the subject, or for the best laid out trees for shelter on farms.

Mr. Holton feared the Lombardy poplar might become a nuisance, as they sprouted up from the root very fast, and were very hard to keep down.

Mr. Bennett did not approve of the poplar; said that it was too tall, and produced worms; but spoke, from practical experience, most favourably of the white cedar.

Mr. Holton spoke well of the silver maple.

Mr. Arnold spoke of the Norway spruce, recommended them above all others, and said that the Lombardy poplars were very injurious to his orchard.

Mr. Saunders corroborated Mr. Holton's remarks as to the silver maple.

Mr. Chisholm spoke highly of beech hedge.

The Secretary favoured the Norway spruce, saying that it could be regulated better than any other, and thrive in any soil.

Mr. Bennett also spoke well of spruce, but thought they were expensive.

Mr. Holton corroborated Mr. Bennett, and was also of opinion that the Norway spruce grew slowly.

Mr. Smith thought that half of the white cedars which were transplanted died, while the Norway spruce were stronger.

Mr. Hamilton thought the white cedar was easily raised.

Mr. Bennett thought the spruce took too long to grow.

Mr. Mills thought the variety of trees should be chosen by parties about to plant with regard to the nature of the soil and other circumstances.

The following resolution was then adopted:—

Resolved.—“That in the view of this Association, there is no question but that the planting of shade trees for shelter to orchards and farms from the cold prevailing winter winds is of the greatest benefit, and this meeting recommends to the Directors to offer a premium for the farm which, within the next five years, shall be most thoroughly and advantageously planted with trees for shelter.”

Carried.

The committees appointed to report on the fruits exhibited presented their reports, which are appended.

The report of Mr. Arnold, delegate of this Association to the Pomological Association of Philadelphia, was then read, and ordered to be printed. This is also appended.

The second question then came up for discussion, namely, The best and most economical system of vineyard culture.

Mr. Saunders recommended Mr. Fuller's plan of keeping the bearing wood near the ground.

Mr. Russel Smith said he had adopted the plan of planting in rows ten feet apart, preparing the soil first. He runs the vines along trellises, and thinks they can be raised in this way on almost any soil. He attends to underdraining, and sets the vines in prepared ridges, training them six feet high, tied to trellises. The fruit seems to ripen better if the vines are trimmed; besides, trimming gets rid of mildew. He trims in the fall, immediately after the grapes are gathered.

Mr. Bauer thought the trellis should run north and south, and the vines be kept down to six feet, the wood being renewed. Laterals should be cut off, and plenty of air allowed to circulate. The leaves are requisite to shade the fruit. The first year, he said, cut down plants to two eyes, the second year to three eyes, and the third to four. He sulphur the plants three times a year by a bellows with a curved nozzle. De la Vergne's system of sulphuring will suit a garden, but not a vineyard. The sulphur is put into the bellows. Sulphur, Mr. B. said, prevented mildew, but would not cure the rot, nor did he know of anything that would.

Mr. Grace said that he adopts Fuller's system of culture.

The third question was then proposed, namely, “The best varieties of vines for making wine.”

Mr. Burnet thought the Clinton too acid for wines, but recommended a mixture of the Isabella and Clinton, half and half; thought the Delaware made the best wine, but the Catawba was very good, as was also the Iona.

Mr. Bauer thought nothing better than Clinton and Delaware. For white wine the

Delaware was as good as any grape raised in Europe; it had all the properties for the best and most solid wine, and if carefully made, the wine would compete with any in the world. The specific gravity of Hartford was 50, Delaware 75. Arnold's No. 5 was very heavy in the saccharine matter.

Mr. Smith made his best wines by a mixture of various kinds.

Mr. Bennett thought a temperature of 62° or 64° during fermentation was essential to good wine.

Br. Bauer was of the same opinion, but preferred 60° all the year round. The equality of temperature made the wine more pure and fine.

The Secretary thought that, for red wine, the Clinton, and for white, the Delaware, were the best.

It was then resolved that, “Whereas a number of parties have brought fruit, especially apples, here, to be named by the Association, a committee be appointed to name such fruit, and that the President name the committee.”

Messrs. Beadle, Arnold, Holton and Leslie were appointed.

The meeting took a recess.

EVENING SESSION.

Subject for discussion, “The best variety of grape for table use.”

Mr. Bennett thought Delaware best for this climate. Iona, Creveling, Adirondac and Isabella would be next, and could be cultivated with success in this section.

Mr. Ball thought that no one grape would fill the gap—that they must have a succession; thought those named by Mr. Bennett were very good. Thought the Rebecca very good, and the Diana the best keeper.

Mr. Bennett thought the Rebecca did not break well in spring, but the Diana kept very well.

Mr. Saunders would place the Delaware first on the list; liked the Adirondac, Iona and Isabella. These were so good he would not know which to choose for next best; liked the Diana very well.

Mr. W. H. Mills would qualify his statement in regard to those grapes just named, as they might be good locally, but not so generally. The Delaware was the best in his own ground, but it does not do well everywhere. The Diana did well with him, but did not ripen evenly and had to be thinned to get good bunches; would add to those mentioned Rogers No. 4; thought a great deal of it; thought the Creveling a very fine grape, but it did not set well unless grown with other grapes.

Mr. Saunders thought Mr. Arnold's No. 5 much superior to the Rebecca, and thought it would compare very favourably with the Golden Chasselas and Sweetwater grown under glass.

Mr. Arnold said the Delaware would succeed in Paris, but it required too much care. With high culture it did admirably. The Iona was a very delicious grape, but it killed

to the ground every winter. If confined to a single grape he would choose Rogers' No. 15; it was the best flavoured grape he had, but not a perfect flower. Rogers' No. 4 was a good bunch. Diana did not bear, was perfectly useless, though it kept well. But he would pit his No. 16 or 2 against the Diana for keeping. Creveling was tender with him. Adirondac, he thought, lacked character—nothing but sugar and water.

Mr. Chisholm thought the seasons as well as the localities had a great deal to do with grapes.

Mr. Beadle said the best table grape was the first ripe grape he could get. The Adirondac and Rogers' No. 3 ripened the earliest, then the Creveling came in, and was very fine, after that some more of Rogers' came in, Nos. 33 and 44; then the Delaware. He liked the Delaware very much; it required a porous soil, it did not do well on stiff clay. The Delaware was the best. He found that Rogers' hybrids, when fully ripe, did not improve, but the Delaware got better the longer it was kept. He had kept it to Christmas. Took Concord next, and found it to ripen better than the Isabella.

Mr. Hislop would enquire if the Association had adopted or appointed a committee for the identification and classification of fruit, and thought it would be a benefit to fruit growers to do so.

Mr. W. H. Mills would suggest that the classification of summer, autumn and winter did very well, and that any closer classification could not be carried out.

Rev. Mr. Skutt thought the Association should pass a resolution recommending the various agricultural shows to have fruit correctly classified and named in all the classes.

Mr. Bennett thought it very important to have all fruit correctly named.

Mr. Beadle then read the report of the committee on seedling fruits. (See report.)

The report was adopted unanimously.

Discussion on the Grape-vine Flea-beetle was next in order.

Mr. Saunders, of London, said this beetle was easier managed in the larva state. In the beetle state it was very active, while it was destructive in both the larva and beetle states.

Mr. Arnold knew enough of the destruction caused by it, but did not know how to get rid of it.

Mr. Bauer thought a lot of chickens would make a clearance of them.

Mr. Beadle found them easily killed in the larva state, which would be the best time to get rid of them.

Mr. Saunders thought hellebore would be effectual in killing the larva.

Mr. Arnold had not found the hellebore of any use; thought the Virginia creeper a nursery for them.

Mr. Saunders thought the same insects that fed on the grape would also feed on the creeper.

Mr. Bauer said a wash of tobacco stems boiled in water, with soap and sal soda added, would be very effectual.

Mr. Saunders thought Mr. Bauer's remedy very good.

Mr. Bauer promised to furnish the exact proportions to the Secretary by letter, for publication.

The pear blight discussion was postponed until next meeting.

Mr. Mills gave notice of motion for amendment of the constitution.

The next meeting was ordered to be held in Hamilton, at the call of the President, and the Society adjourned.

At the Directors' meeting held immediately after, it was resolved that the following subjects should be submitted to the next meeting for discussion, namely:—

1. The pear blight.
2. The best varieties of winter pears.
3. Does close summer pinching in or heading back produce bearing fruit spurs? If so, is it done without injury to the life of the tree? When is this pinching to be done, and how?
4. What effects are produced by thinning out fruit, both as regards the fruit and the tree?
5. Can fruit be kept for any length of time beyond the natural period of ripening, and how?
6. What are the best varieties of apples for shipping?

FRUIT REPORTS.

REPORT OF COMMITTEE ON APPLES.

Your committee find a number of seedling apples, namely:—

Shown by C. Arnold, Paris, five varieties

Shown by A. Forfar, Scarborough, three varieties.

Shown by Mr. S. M. Durkee, Wellington Square, two varieties.

Shown by James Cowherd, Newport, seven varieties and six of crabs.

Shown by Thomas Chisholm, one variety.

In cultivated varieties:—

James Heaslip exhibits King of Tompkins County.

Mr. Woolverton shows Cranberry Pippin, King of Tompkins County, Cooper's Market Baldwin and Yellow Bellflower.

Mr. Russel Smith sends Northern Spy, Baldwin, Seek-no-further, Ribston Pippin, Greening, Rambo, Swaar, Spitzenberg, Talmans Sweet, Sweetbough, Fall Pippin, Fallwater, and several varieties for name.

Mr. James Grace shows about twenty varieties, for which he wishes names.

W. A. Smith shows twelve varieties of apples.

W. H. Mills, Hamilton, exhibits a fine sample of Alexander, King of Tompkins County, R. I. Greening, Gravenstein, Autumn Strawberry, and three crabs.

Mr. James Cowherd, Newport, shows a fine collection of forty-three varieties of ap-

ples. The largest apple amongst them is the Flower of Genesee,

Thomas Spencer shows an exceedingly fine sample of King of Tompkins county.

P. Turnbull shows twenty good varieties of apples, and three varieties for name.

Many of the specimens shown are very creditable, but of the cultivated varieties no new ones are noticed, except such as have been on exhibition before. Not having tested the seedlings, we can say nothing of them, more than that some are of fine appearance. The testing them comes under the jurisdiction of another committee.

GEO. LESLIE.

CHARLES ARNOLD.

REPORT OF COMMITTEE ON PEARS.

Your committee appointed to examine the pears upon the table beg to report that they find the following:—

From President Burnet, fifteen varieties, among which they find—very fine—Beurre Bosc, Duchess, and Flemish Beauty—a specimen of the latter weighing one pound.

F. M. Bennett, 30 varieties, including Winter Nellis, Sheldon, Easter Beurre, and Belle et Boune, of superior excellence.

From Mr. Woolverton, eight varieties, among which five Swan's Orange and King-sessing were noted.

From Mr. Whitlaw, fifteen varieties, including handsome specimens of Triomphe de Jodoigne, Kingsessing, and Louise Bonne de Jersey.

From Mr. Arnold, three varieties.

From Mr. R. Smith, three varieties.

From Mr. Grace, one variety.

From Mr. W. A. Smith, eleven varieties, among which were noted good specimens of Stevens' Genesee, Verte Longue, and Louise Bonne de Jersey.

From Mr. Holton, fifteen varieties, including handsome Howell and Napoleon.

From Mr. W. H. Mills, ten varieties, among which we note fine Duchesse, Belle Lucrative, and Vicar of Winkfield.

From Mr. Turnbull, three varieties.

From Mr. Ball, one variety of seedling pear, small size, not ripe, for further examination.

Your committee have to express great satisfaction at the splendid display, as a whole.

All of which is submitted.

W. HOLTON.

C. E. WOOLVERTON.

REPORT OF COMMITTEE ON GRAPES.

Your committee on grapes, plums, &c., beg to report as follows:—

We find placed on the table by Rev. Mr. Burnet, of Hamilton, three varieties of grapes, namely, the Hungarian Princess, grown in the open air, weighing one pound and over, a grape very compact, but not of high flavor, which may be owing to the extremely wet season; the Riesling, and the Custer Seedling No. 1, of very fine flavour, grown in open air, by the Rev. Dr. McMurray, of Niagara.

Mr. William Saunders, of London, exhibited some fine Pond's Seedling plums, measuring 6 inches in circumference; and Smith's Orleans, 5½ inches.

Mr. A. B. Bennet, of Brantford, showed Delaware and Creveling grapes, fine and quite ripe, and Ionas.

Mr. Hislop, of Ancaster, showed Fox grapes, very large.

Mr. Woolverton, of Grimsby, showed Allen's Hybrid, Iona, and Diana.

Russell Smith, Esq., of Fairfield Plains, exhibited Black Hamburg (under glass), Concord (open air), also Hartford Prolific, very good, and Delaware.

Mr. W. H. Mills, Hamilton, some fine Dianas, weighing ten ounces in the bunch; Delawares, 4½ ounces; Isabellas, 9½ ounces; also a very poor grape called the King; Rebeccas, Rogers' No. 15 and 4, Concords, very good and large, and well ripened; Ionas, nearly ripe; Black Hamburgs (under glass); also Bowood Muscat, a single bunch weighing 1 lb. 6¼ oz.; some very fine plums, namely, Pond's Seedling, Reine Claude de Beray, and Bingham.

Mr. Arnold, of Paris, exhibited some fruit of fall bearing raspberries, namely, the Yellow Canada raspberry, Arnold's Red, and the General Negley.

A variety of peach called the Smock Free-stone, a late, large, fine peach for preserving, was placed on the table by Mr. Woolverton, of Grimsby.

We would not feel justified in closing this report without taking special notice of some very fine seedling peaches placed on the table by Mr. James Cowherd, of Newport, 6 varieties, some of which we trust he may put more prominently before the country by inviting a committee from this Association next season to examine and report upon them.

W. H. MILLS.

WM. SAUNDERS.

REPORT ON SEEDLING FRUIT.—APPLES.

Mr. Cowherd's collection:—

No. 1.—Fall apple, large, conical, striped, acid, only fit for cooking, and has no distinctive merits to make it worthy of dissemination.

No. 2, said to be a seedling of the Esopus Spitzenberg, possessing in appearance much of the characteristics of that fruit, but much larger. A very promising apple, which the committee would like to test when fully ripe.

No. 3. Fall apple, medium size, pleasant sub-acid, but not equal to other cultivated varieties of same season.

No. 4. Medium size, sharp acid, without flavour.

No. 5. Very fine medium size, promising to be a good keeper; very acid, but the committee would like to see it when fully ripe.

No. 6. Fall apple, sweet, medium size, no particular merit.

No. 7. A pretty apple, but very tart, without flavour.

Mr. Chisholm's:—

One variety, medium size, conical, green, with a red cheek, very acid, and no improvement.

Mr. Forfar's:—

No. 1. Fall apple, medium size, flattish, pale yellow, said to be grown on a tree 70 years of age; mild, very agreeable flavour and fine grain, a very promising table apple, not to be overlooked.

No. 2. Fall apple, sweet, flat, red, striped, no merit.

No. 3. Winter apple, flat, green with a red cheek, and covered with numerous white dots; firm flesh, of a peculiar and rich flavor; an apple to be looked after by the committee.

Mr. Durkee's:—

No. 1. Conical, red, striped, but no merit.

No. 2. Good size, very handsome, flat, very red, striped, an early winter apple, in the estimation of the committee only fit for cooking. Mr. Durkee has, however, promised to lay the apple before the committee during the winter.

In the collection of seedling crabs by Mr. Cowherd, there are none of anything like the quality of the Transcendant, consequently can not be recommended for dissemination. One of them, No. 2, has more the appearance of a small apple than a crab, and is quite sweet.

In Mr. Cowherd's collection of seedling peaches, the committee are of opinion that those marked Nos. 4, 7, 9 and 10 are the best, and should not be lost sight of. The committee hope to see the peaches numbered above laid before them or the Association another year.

REPORT OF THE DELEGATE

SENT BY THE FRUIT GROWERS' ASSOCIATION OF ONTARIO TO THE AMERICAN POMOLOGICAL CONVENTION AT PHILADELPHIA.

Leaving Paris on the thirteenth of September by the first morning train going east on the Great Western Railroad to Suspension Bridge, and from thence to Elmira via Buffalo, the traveller in the railroad cars perceives but a slight difference in the face of the country bordering on either side of the frontier lines, except that on the American side a greater proportion of land is devoted to fruit. Many very large orchards of apples and pears were to be seen, as well as grapes and other small fruit, but the health and vigour of the trees, and the quantity and quality of the fruit, on the Canada side of the line, would seem to compare very favourably with the orchards of our cousins in that section of the United States.

All kinds of out-door grapes, this season, appear to be a failure there as well as in Ontario.

As we proceed eastward southward, through a beautiful valley that had the appearance of at some previous date being the bed of a large river, with the banks sloping gradually back, in some places from one to two miles

on either side, the railroad and common road run winding through the centre, and in many places were cut through immense rocks. The farm houses here were generally plain one and a half and two story clapboard buildings, with good sized orchards of apple and peach trees, and small gardens.

Night now coming on, a considerable portion of the road, to the southeast of Harrisburg, was passed over in the dark, but I will try and avoid the error fallen into by some Americans, who take the night train of the Great Western from Suspension Bridge to Detroit, and wake up in the morning in the big marsh at the western end of the road, jumping at the conclusion that the whole country is a swamp. For although, as we came near the city of Philadelphia, I saw one or two admirable duck ponds, and a few places that looked as though they afforded splendid sport for a Frenchman fond of frogs, yet on the whole it is without doubt a very fine country I could not, however, help thinking, that if a person should go to sleep upon the cars between Hamilton and Paris, and should wake up within fifty miles of the City of Brotherly Love, he would scarcely perceive any difference in the surrounding country.

But we are now near our destination, and as we enter the city, the wisdom and foresight of its founder, William Penn, become apparent, in the laying out of such noble streets, all in parallels and right angles, and instead of having such ridiculous names as streets in some cities, they are merely numbered.

But without attempting to describe the city, let us go direct to Horticultural Hall, a fine large substantial stone building, with several round massive freestone columns in front, wreathed with small branches of evergreens for this occasion, being the fourth meeting of the American Pomological Society in this Hall. On entering the building a great profusion of fruit from every section of the country is just being arranged, not upon long, straight, stiff tables, such as we have at our exhibitions, with railing in front, and placards with "Hands off" upon them; but with tables of all sizes and shapes, to suit the requirements of the persons who have fruit to exhibit, with no railing in front, or constables to keep hands off, and it was pleasing to see that every person there had good sense enough not to handle the fruit. It would be folly to attempt a description of the fruit shown, but one very noteworthy feature of the exhibition was the great variation of the same varieties in different soil and climate.

The small collection of fruit from Ontario, exhibited by Mr. Mills of Hamilton, would, I think, compare very favourably, in size and quality, with that from any one State. And your delegate was very much annoyed to find that fruit sent by American Express from Paris on Monday morning, did not reach Philadelphia during the exhibition.

On Wednesday, the 15th, the Pomological Society organized for the transaction of business.

APPLES.

Apples were discussed, but little information was elicited. A collection of apples from Kansas was the finest on exhibition, equal, if not superior, to any I ever saw in Canada. Grimes' Golden is a new apple that was spoken well of by every one, as a great bearer, first quality, good keeper, and perfectly hardy.

PEARS.

In the discussion on pears, the following is a list that promises well over a large extent of country. Clap's Favourite, Rutter, Darius Hovey, President, Assumption, Duc de Bordeaux, Gooddale, Josephine de Malines, Friedrich of Wurtemberg, Sarah, Mount Vernon, Foster.

PLUMS.

There was but little discussion on the plum; the cultivators of this delicious fruit have, in many places, been driven from the field by the "uncompromising little Turk." The Wild Goose plum was the only one spoken of as promising well.

GRAPES.

There seemed to be a general desire of delegates from all parts to avoid a discussion on the merits of the different varieties of grapes. The only new grapes exhibited were two or three seedlings by Dr. Wylie, of South Carolina, and Mr. Underhill, of Croton Point, N. Y. The Eumelan and Walter were on exhibition, and loudly praised by the original disseminators.

RASPBERRIES.

The difference of opinion in regard to the merits of the different varieties of the raspberry was remarkable. Each section of the country had its pets. In the New England States the Black Cap family were condemned in toto, while in the West all except the Caps were condemned. The Yellow Canada, so far as I could learn, promised to succeed over a greater portion of country than any other variety. This, perhaps, is accounted for from the fact that it is a cross between the Cap and the European species. The Clark, Philadelphia, and Mammoth Cluster were all well spoken of for certain sections.

STRAWBERRIES.

Charles Downing was spoken well of by all who had tried it; Napoleon III., Dr. Nicaise, Wilder, and Michigan were highly praised by a few.

CHERRIES.

There was no discussion on cherries, the old varieties, such as Elton, Governor Wood, Napoleon, Tradescants Black Heart, May Duke, Black Tartarian, Knight's Early Black, and the old Kenush, were still shown to be the favourites, by each delegate naming the three best for his section.

And now, to conclude this very imperfect report, I beg to say a few words about the very warm reception the Ontario delegate received; not only from the veteran pomolo-

gists, M. P. Wilder, Downing, Medhan-Elliot, Fuller, Manning, Saunders, whose names have now become household words; but from a host of other prominent warm-hearted pomologists; from the gentlemanly directors of the Pennsylvania Horticultural Society; from the Mayor and City Council of Philadelphia, and many worthy citizens. To all of these I should like to tender my sincere thanks. Such was the kindness shown on this occasion, that it was very difficult to resist the sight-seeing and find time to attend to business.

In the first place, the National Mint was thrown open, where every variety of coin from the Widow's Mite to the American Eagle can be seen. Then comes the Gallery of Natural Sciences, where specimens of every kind of living thing, from long before the flood down to the present time, are to be seen. On entering the door the first creature that looks you in the face is a gorilla. Your admiration of the animal is not much excited, but turning around you find a long row of your fellow creatures' skulls, notorious murderers and villains from every quarter of the globe. You give an involuntary shudder, and prefer almost to claim relation to the gorilla rather than to these.

But look up and what do you see? Oh! the monster, the skeleton of an extinct race of lizards, from thirty to forty feet long. And must we pass those tens of thousands of birds, animals, fishes, and insects, all so well arranged in this noble building, with only a passing notice? Yes, in order that we may spend a few moments in Independence Hall. Saluting first the marble statue of the immortal Washington, on the outside, we step within and find life size portraits of all the signers of American independence, and a host of other worthies, among them the full figure of William Penn; and here stands the old bell that rang out the first (perhaps tremulous) sound on that momentous occasion. I fancy that many Canadians, looking at this old bell, would regret that it is so badly cracked, having a kind of curiosity to know how the old chap sounded on the occasion above referred to. Some naughty persons, I have no doubt, would suggest that the crack was emblematical: but I am told that the crack is no larger than it was fifty years ago.

I regret that, on this my first visit to this national monument, I should have acted a little rudely, in that, while the Mayor and the President were delivering their eloquent addresses, I found myself standing in front of the life-size painting of Dr. Franklin; and in my pride and imagination was shaking hands with him, and wondering if there were any living Ben. Franklins, or George or Martha Washingtons then in the room; but my reverie was soon broken, by a friend putting his hands upon my shoulders, turning me round and introducing me to the Hon. Daniel Fox, Mayor of Philadelphia, who, by the way, appeared like a real gentleman. Upon my

name being mentioned as coming from Canada, he gave me an extra shake of the hand.

It was my intention on leaving Philadelphia to visit Vineland, only thirty miles away; but circumstances and the weather prevented it. From all the information I could get, the conclusion arrived at was: That there are many better places for fruit growing, and some worse. That good fruit can be grown in Vineland, there is no doubt, but that land equally good and equally cheap can be got nearer New York, Philadelphia and many other large cities, is also true.

I mention this for the information of those of my countrymen who have thought of moving to this land of promise. One gentleman remarked that he had been to Vineland, and he would advise everybody to go there and see for themselves, as he had done. He concluded by saying, "the land was there, but not the vines."

All of which is respectfully submitted by
CHARLES ARNOLD.

Paris, Oct. 6th, 1869.

Brantford Horticultural Society's Fall Exhibition.

The fall show of this society was held in the drill shed in the town of Brantford, on Wednesday, 29th September, and was a very successful affair.

The fruit department was the main attraction, and was well deserving of high praise. Apples were well represented, and some splendid specimens were shown.

In this department the first prize for twenty varieties was awarded to Mr. Turnbull for Northern Spy, Esopus Spitzenberg, R. I. Greening, Snow, Pomme Grise, Golden Russet, Roxbury Russet, Baldwin, King of Tompkins Co., Hawthornden, Keswick Codlin, Tallman Sweet, Swaar, Hubbardson's Nonsuch, Steel's Red Winter, Golden Sweet, Yellow Bellefleur, Ribston Pippin, Autumn Strawberry and Large Russet.

The first prize, 10 varieties, was awarded to Judge Jones, and comprised Bourassa, Canada Reinette, St. Lawrence, Duchess of Oldenburgh, Northern Spy, Early Sweetbough, Pomme Grise, English Russet, Keswick Codlin and Maiden's Blush.

Second prize, ten varieties, to James Cowherd, with Duchess of Oldenburgh, Porter, Alexander, Pomme Royal, King, Blenheim, Pippin, Twenty Ounce, Flower of Genesee, R. I. Greening and Baldwin.

In fall dessert, four varieties—1st to W. A. Smith, for St. Lawrence, Fameuse, Gravenstein and Diap d'Or. 2nd to J. Cowherd, for Summer Queen, Golden Sweet, Porter and Snow.

Best four varieties fall cooking—1st to J. Cowherd for Duchess, Gravenstein, Blenheim, Pippin and Maiden's Blush.

Best four varieties winter cooking—1st to J. Cowherd for Baldwin, R. I. Greening, Red Spitzenberg, and Esopus Spitzenberg.

Best four varieties winter dessert—1st to W. A. Smith for Spitzenberg, Pomme Grise, Northern Spy and Ribston Pippin.

Fall cooking, six of one sort. 1st to J. Cowherd, for Hawthornden.

Fall dessert, six of one sort. 1st to George Smith, for Gravenstein; 2nd to Geo. Smith, for St. Lawrence.

Winter dessert, six of one sort. 1st to W. A. Smith for Pomme Grise; 2nd to J. Cowherd for Ribston Pippin.

Winter cooking, six of one sort. 1st to W. A. Smith, for King of Tompkins Co.; 2nd to J. Cowherd, for Baldwin.

The display of apples was very good, and the competition very keen, much more so than ever before.

In pears the show was very fine, and of very superior size and quality.

The 1st prize, best six varieties, 30 of each, was taken by Mr. Bennett with Beurre Brown, Belle Lucrative, Duchesse d'Angouleme, Louise Bonne de Jersey, Doyenne d'Alencon and Winter Nelis.

The second prize for the best six varieties was given to Mr. W. A. Smith for Flemish Beauty, Vicar of Winkfield, Beurre Diep, Belle Lucrative, Glout Morecan, and Bartlett.

Best six fall dessert pears, was given to Seckel.

Best 6 winter do. do. to Winter Nelis.

Best collection of pears, 20 of each. 1st prize to Mr. Bennett for Beurre Brown, Beurre Diep, Bizy de Montigny, Belle Lucrative, Farrell, Duchesse d'Angouleme, White Doyenne, Howell, Louise Bonne de Jersey, Seckel, Beurre d'Arenburgh, Lawrence, Doyenne d'Alencon, Josephine de Malines, Winter Nelis, Beurre Gris d'Hiver, Sheldon, Oswego Beurre, Grey Doyenne, Belle et Bonne, Easter Beurre, Dearborn's Seedling, Saguennay, Belle Camuze, Rostiezer and Brandywine. Mr. Cowherd second with 15 fine sorts.

In peaches Mr. Cowherd took the lead with his fine seedlings, which only require to be known to be much more widely appreciated.

In open air grapes the show was very deficient, owing to the coldness of the season. A fine sample of Iona, fully ripe, was shown by Mr. Bennett, some fine Sweetwaters and Concord by Mr. Russell.

In hot-house grapes the Hon. H. B. Wood monopolized the list.

The amateur show of fruit was very fine. Some really nice collections were shown—amongst which one shown by Mrs. Waterous was especially deserving of mention, and contained some very fine pears and other fruit—all very handsome.

In flowers the show was meagre. Green-house plants and cut flowers were both short in quantity and quality—the amateurs certainly excelling in this department; and the annuals, dahlias, asters, marigolds, stocks and zinnias shown by Mrs. George

Smith were well worthy of the several prizes taken by her. Some really fine dahlias were shown by Mr. John Arnold, of Paris.

The show of vegetables was large, but contained nothing especially deserving of mention, with the exception of a fine sample of Breeze's Prolific potato, shown by Mr. Turnbull, which was very excellent.

The table for special prizes was the most attractive object in the building, and was especially deserving of the large share of attention bestowed upon it, being covered with the finest samples of fruit, all of the most tempting description, comprising hot-house grapes, peaches, pears, apples, &c., &c., all of the very best of their respective sorts, and altogether formed a very choice exposition of the fruits of Brantford.

The exhibition was well patronized, and yielded more than double the receipts of the fall show of last year, and was by far the best fall exhibition ever held in Brantford.

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Autumn Meeting of the Fruit Growers' Association of Western New York.
HELD IN THE CITY OF ROCHESTER, SEPT. 29TH, 1869.

Since the platform of the Society has been enlarged so as to admit flowers as well as fruits, the tables have been gaily decorated with choice specimens of the floral kingdom, and the exhibition of fruits and flowers was very fine indeed.

In fruits the display was mainly confined to pears, the largest collections being shown by Ellwanger & Barry, and Frost & Co., the former with ninety-eight varieties, and the latter sixty.

Among the pears we noticed some very fine samples of Flemish Beauty, Seckel, Sheldon, Beurre Clairgeau, Doyenne, Boussock, Beurre Hardy, Buffam, and Beurre d'Anjou, all fruits of the highest excellence.

There was on exhibition a mammoth specimen of the Gloria Mundi apple, grown in California, nearly as large as a pumpkin, and probably quite as good.

A plate of Rea's Mammoth Quince attracted considerable notice, from the large size and fine appearance of the fruit.

There were some thirty varieties of open air grapes exhibited, but many of them were quite unripe. Indeed, we could not perceive that they were in any degree in advance of those shown at the Provincial Exhibition in London. The best ripened were the Hartford Prolific, Adirondac, Miles and Delaware. There was a plate of Scuppernon grapes from South Carolina. These seem to be much like our Fox grapes, and were all separated from the cluster, resembling a dish of small plums.

There was a plate of very fine seedling peaches, grown by the Rev. E. Sawyer, of Parma, N.Y., which for size, beauty, and flavour, would compare well with the Early Crawford.

The display of gladiolus in bloom was truly magnificent, but we saw no varieties that surpass in beauty those in cultivation in our own Provinces.

The collections of dahlias were very large, but beyond that there could not be a great deal said in their favour. A few varieties, such as Lady Jane Ellis, Bird of Passage, Fanny Purchase, etc., were fine, but the great bulk of them were not up to the mark. Indeed, we doubt whether out of the whole a dozen varieties could have been selected that would be equal to the dozen shown by George Leslie & Son, at London.

There were some most beautiful varieties of Drummond Phlox shown by Mr. Vick, that for perfection of form and beauty of colour we have never seen excelled.

A new climbing pea of great beauty, recently introduced from Japan, called Ampelopsis Veitchii, was shown by Mr. John Chorlton, who also exhibited an interesting hardy flowering plant, called the Tricyntus hirta, bearing flowers of a very novel form and colouring, and of considerable beauty, being much like some of the orchids in appearance.

Mr. Chorlton also exhibited two new varieties of potato sent out by Mr. Breeze, who originated the Early Rose. The varieties shown were "King of the Earlies" and "Breeze's Prolific." Mr. Chorlton kindly presented us with a sample of each variety, which we hope to plant another season, and report thereon to the readers of this journal.

There was no discussion upon fruits or flowers at this meeting.

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Dead Grape Leaves.

"A Constant Reader" writes to us from Stirling, as follows:—

"A neighbour of mine has a grape vine (the Isabella), the leaves of which are in a state of decay. Some of them I can rub to a fine powder, others are perforated thickly with small holes, and the crop of fruit, an abundant one, can make no further progress. Would it have been possible to have applied a remedy when the disease was first noticed? Would it be desirable to collect the decayed leaves and burn them? I have a small vine (a white variety) similarly affected. If you would suggest any remedy or preventive you would greatly oblige," &c.

It is not easy to tell the exact nature of a disease, nor the cause of the evil, without

an actual inspection of the vine, or at least an opportunity of comparing the healthy with the decaying foliage. And even after seeing the foliage it might be very important to the formation of a sound judgment to know something more of the soil, situation and aspect. Were the perforations made by an insect of any kind, or were they caused by the destruction of the tissue of the leaf by some other agency? Did "A Constant Reader" carefully examine the foliage so as to decide whether there was a small parasitic fungus preying upon it?

The Isabella is quite liable to the attacks of parasitic fungi on the foliage, and more especially if growing in a cold, imperfectly drained soil; or if allowed to grow too densely; or if the season be, as this has been, very wet. If the white grape is of the Sweetwater or Chasselas family, it is even more liable to these attacks than the Isabella, and it seems to us very probable that the cause of the decay of the foliage in both these cases might be traced to parasitic fungoid plants growing on the under side of the leaf.

If the above supposition be correct, then the prevention is to be found in avoiding those conditions, as far as possible, which favour the growth of these parasites. This can be done by planting on soil that is dry and warm, either naturally or made so by underdraining and tillage; by sufficiently reducing the number of shoots at spring pruning so as to give free and full circulation of air through the foliage, and by not stimulating the vines with nitrogenous manures. The season we cannot control, but by judicious management we can ameliorate its effects.

The remedy lies in a free use of sulphur, showered on the ground and dusted over the leaves, and applied to the under side of the leaves by means of a De la Vergne bellows. Diluted carbolic acid may also be used, applying it by means of a garden syringe. This acid is very destructive to fungoid life.

Most of the diseases or diseased conditions of our grape vines are to be attributed to injudicious pruning, unsuitable soils, and high manuring. The summer pruning, which has been much in vogue, cutting away yards of vine in full growth, and stripping off the leaves to let the sun in to the grapes, is the height of folly. As "A Constant Reader" has truly said in his letter, the grapes do not mature because the leaves are wanting, and this style of summer pruning tended only to weaken the vine and produce unripe grapes. When the buds first break in the spring they can be rubbed off with the finger, and then is the time to do most of the summer pruning in the way of thinning out. The thumb and finger, by pinching off the terminal point of a shoot, will be all that is needed to check its growth, when that is requisite. It is a mistake, also, in this climate, to prune in the autumn; it entices the plant. The proper time is in the first half of April.

On the History and Cultivation of the Raspberry.

The Raspberry is a native of Europe and America, found in abundance in shaded situations. There are now many varieties; notwithstanding all that has been written about the plant, very few speak from long experience. With this view let me speak from mine. If you wish, next season, to set raspberries in the garden, be sure to plant a row or more, of different sorts, in some cool and rather shady retreat. You may have the Dessert kinds in the open quarters with the other fruit, or even with cabbage and winter spinach, if you please; but for eating on the spot, there ought to be a few stools planted that those who walk may eat, and that without having to stir one step from the proper pathway. Raspberries, I think, are the best fruit in cultivation to be gathered and eaten on the spot, and are invaluable too for the more formal but more enjoyable dessert. There is a fly that has a keen scent and an epicure's palate; it selects the blossom of the Yellow Raspberry for the deposit of its eggs; there the grubs are produced and take up their abode in the berries, and by the time the fruit is ripe the grubs are ripe also, and ready to assume the pupa condition. There is no cure for this; you can only throw away infected berries. There is no red raspberry equal, for the dessert, to the old Red Antwerp (true, for it has a number of names). When the cultivator of raspberries desires only to have a fair supply adapted for culinary purposes, a few of the red varieties only should be selected and planted, and the best of these are, Red Antwerp, Fastolf, Prince of Wales, and Vice President; no matter what quantity is required, I should confine myself to these four, at the same time I would have no less; long experience has taught me never to depend on only one sort. As a market garden variety, Fillbasket has few, if any, rivals, but it is not good enough for private families; for a late bearing sort nothing comes up to Large Monthly, except some French varieties which I have not tested, or seen tested by others; this last named you may have up to November. To grow these late kinds you must not trust to the canes of the preceding year; they bear their best fruit on canes of the current season; therefore the best way to manage them is to cut them down to the ground in March; in May the young suckers must be thinned to a foot apart, and as the season advances they will produce large berries in plenty, and if the season be mild will be in bearing till November.

The habit of the raspberry is to throw up from the root a certain number of shoots, or as they are called, canes; these grow one year and the next year produce fruit, and after the fruit has ripened, they die, and are succeeded by another lot of canes that were growing while those fruited. To prune the raspberry is, therefore, very simple. In autumn cut away the dead wood, and thin those

that are to fruit next season to four or five canes on each plant or stool; it is well also to shorten those left according to their strength and the nature of the variety; five feet may be considered a sufficient length for the strongest canes and under the most favourable circumstances. Wherever raspberries are taken up you will always find a mat of roots, and always running near the surface; in fact, in a year or two a plantation of raspberries becomes a complete felt of fibres. From this learn, that to dig amongst them will be very injurious, and in practice the spade ought never to enter the ground amongst raspberries.

There are few soils but will grow the raspberry to perfection if the cultivation is what it should be; notwithstanding this, there is a common impression that it is difficult to grow it on some soils; but there is no need for this impression by those who are prepared to do it justice. The last few years' experience has taught me that the raspberry will do as well, even on stiff clay soil, provided it be well drained. But for the general cultivator there can be no doubt a well drained, deep, unctuous loam is the best; and in such a position they would be likely to go on for years in a productive state, with only ordinary care and attention. Stagnant water at the roots is the greatest enemy the raspberry has; in this state they are never productive, to say nothing of weakness and debility. The great and principal secret of success is to plant them in a rich, deep, and well drained soil, taking care to mulch it well, and placing a good coating of fat manure eighteen inches under the surface. This will induce a downward tendency of the roots, and render them less liable to feel the effects of dry, hot weather in summer. Having this layer of dung so far beneath the surface, it will be necessary to give the surface a liberal dressing also; this should be done when the ground is all trenched and forked in and the surface is dry. I also use a good coating of wood ashes along with the manure; they seem to enjoy a little wood ashes as much as anything. They require an open, airy, but nevertheless shady position, but upon no account under the drip of trees; in such a position they bear heavy crops, although a little late. Manure ought not to be used but every alternate year, and it is necessary to bear in mind that they are very gross feeders during the season of growth, and when the soil is poor and impoverished by old stools, a thorough mulching with sewage, or strong manure water, if the weather is at all dry in June, will do an immense amount of good, as it will enable the suckers to make a vigorous growth, and therefore secure a large crop the succeeding year. Upon the suckers depend entirely the chances of a good crop the next year, for if they be weak they will produce but scanty fruit; therefore all the assistance the cultivator can render them by the application of stimulants during the time they are in active growth, will add considerably to their fruitfulness the next

season. No more of the young canes should be allowed than five on each stool, as by allowing more of them to remain they shut out the action of the elements, which, if allowed to play amongst them, will give strength and substance, and so increase their fruitfulness. As to the different methods of training them, there can be but one opinion, practically speaking, for the more the canes are exposed the better, as they have more space to develop themselves, and receive a greater amount of benefit from external influences than when tied together.

JAMES JOHNSTONE CRAIG.

Late Gardener to William Bird, Esq. J. P., Crouch Hall, Hornsey, London, Eng.

NOTE BY THE HORT. EDITOR.—The plan of spading in a thick coating of manure to the depth of eighteen inches is a sheer waste of manure and labour. The best method of manuring raspberries is to apply it to the surface of the ground. When our correspondent has had a little longer experience in Canada he will know better. If the surface is kept friable and well manured the plants will not suffer from heat.

How Lilies are Propagated.

The Japanese lilies are so hardy, as well as beautiful, that they should become as common as the Turk's Cap and Tiger Lilies. They are now all moderately cheap, and if one only has a bulb or two to start with, the stock may be readily increased. If left to themselves, the bulbs become large clumps by natural subdivision, but this is a slow way of multiplying them. If a lily be taken up in autumn, after the leaves have withered, there will be found upon the stem, just above the old bulb, a mass of small bulbs intermingled with roots. A dozen, and even more, are frequently found. The little bulbs may be removed and planted out separately, or the stem to which they are attached may be cut off just above the old bulb, and set out with the cluster of bulbs and roots attached. They should be covered the first winter with a few inches of litter. The next season they will make strong bulbs. Another method of propagation is from the scales, of which the lily bulb is mostly made up. These scales are attached to a solid portion at the base of the bulb, and they are broken off close to this, it being important to get the very base of the scale. The outer scales of a bulb may be removed without injury to it. Indeed, the majority of those offered for sale by florists have first been deprived of their outer scales, which makes the bulb look better, and at the same time gives them material for propagating. The scales are set out in an upright position in boxes of sandy compost, pressing them down into it until the point is about level with the surface. The boxes are to be placed in a room where they will be at about the temperature of 50 or 60 degrees, and kept just moist

enough to prevent shrivelling. In about two months a small bulb, sometimes two, will be found at the base of each scale. In spring the boxes are plunged in the open ground, and the bulbs allowed to grow all summer; in the following autumn cover them with litter, and the next spring, if too thick, they are to be planted out separately. Another plan is to mix the scales with moss (sphagnum), such as is used for packing plants, and place them in a box in a warm room. They should not be so dry as to shrivel, nor so moist as to be in danger of rotting.—*Farmer* (Scottish).

The Golden Thornless Raspberry.

In the *Small Fruit Recorder* for September we notice an account of a new Yellow Cap Raspberry, which originated in the State of Minnesota, where it was conspicuous for its extreme hardiness and wonderful productiveness. The Editor of the *Recorder* states that it is fully equal to the Mammoth Cluster in size of berry, and if there be any difference in the bearing qualities, the Golden Thornless is the more productive, and that its season of ripening is extended over the whole raspberry season, ripening with the first and holding out to the very last, while the berry is the firmest of all. Mr. J. J. Thomas says of it that some quarts of it that had been sent to him appeared as if just picked, while the Mammoth Cluster in the same case were somewhat the worse for the transit, and the Clarke badly jammed. He adds that the only objection to the Golden Thornless is its partial deficiency in flavour, which he thinks will not prevent its being extensively cultivated for market.

We have not yet seen this Raspberry, but in time we shall come to know more of it, and will try to keep our readers informed on the subject.

Catalogues Received

Wholesale Price List for fall of 1889 of the Palmyra Fruit Nurseries. Purdy & Johnston, proprietors, Palmyra, N.Y.

Wholesale Catalogues of trees, plants, &c., cultivated and for sale by Mahlon Moon, Morrisville, Bucks Co., Penn.

Trade List of fruit and ornamental trees, grape vines, small fruits, shrubs, roses, &c. Erie Exchange Nurseries. J. A. Plattman, proprietor, Erie, Penn.

Duchess Nurseries' Wholesale and Retail Price List for the autumn of 1888. Ferris & Caywood, Poughkeepsie, N.Y.

University Avenue Nursery Wholesale Price List of small fruits, &c., for the fall of 1889 and spring of 1876. John Charlton, proprietor, Rochester, N.Y.

Wholesale Catalogue of fruit and ornamental tree seedlings, &c., 1889-70. Waukegan Nursery Robert Douglas & Son, Waukegan, Lake Co., Ill.

Fall Retail and Wholesale Catalogue of Reading Nursery. J. W. Manning, proprietor, Reading, Mass.

The New Jersey cranberry crop this season in Ocean county alone is valued at \$2,300,000. An acre of good cranberry land is now estimated to be worth from \$1,000 to \$2,500. The demand in market is always in excess of the supply.

BLACK KNOT ON PLUM TREES.—A correspondent in one of our exchanges, says he cures black knot in this way:—Take a paint brush, dip it in spirits of turpentine, and thoroughly saturate the knot, being careful not to touch the tree except in the diseased part. It stops the knot, and the tree puts out healthy branches below it. I am careful to burn all branches removed in pruning. As the summer is the time the mischief is done, every fresh excrescence should be pared off the turpentine applied, and it will harden in a week.

CHARLES DOWNING STRAWBERRY.—Mr. Doty said he was pleased with it. It promises to give an abundance of fruit of excellent flavour, uniform, and of good size. Grown beside the Agriculturist and other sorts, it is very promising. On one occasion a company of judges of fruit sat at the table, and twelve varieties of strawberries, including Triomphe de Gand, Boyden's No. 30, Romeyn's Seedling, Durand's Seedling, and other new varieties, were set before the company without labels, and the award of superior flavour was given to "Downing." It is uniform in size, not so large as some varieties, and hence will not become so popular a market berry. Unlike some other varieties, it seems to adapt itself to all localities so far as tested, and will be likely to become generally popular for family use. Mr. Fuller says it is the best berry of that family of strawberries he knows of. The characteristics of the family are hardiness, productiveness, and they will grow almost anywhere.

KEEPING BULBS AND TUBERS THROUGH THE WINTER.—A correspondent of the *Rural World*, after severe losses, has experimented in this matter. He buried in sand, in a cellar free from frosts, dahlia and gladioli, and also placed a like quantity of the same in barrels, as he would potatoes, with ventilation at the bottom, and set the same on hanging shelves in the cellar. All came out in good condition in the Spring. Not one in a thousand was lost. Those in sand were very much sprouted, and made splendid early-flowering plants. He is satisfied that if almost all tender bulbs and tubers are not kept wet, but in a moderately damp condition—the amount of dampness collected and transmitted from one to the other by being packed closely in barrels—they will keep in much better shape than where dried for weeks, and then packed in damp sand. Keep from frost, from wet, and too dry a position.

SPECIMEN PLUMS.—Mr. Peter Rowen, of Sharon, sent us two fine specimens of plums for name, with the following note:—"The trees are of a hardy nature, standing the win-

ter admirably. They blossom extensively, the fruit forms regularly, and they bid fair for an abundant yield; but when about one quarter grown they become subject to the ravages of the curculio, commence to fall off, and continue to do so until they mature, leaving the crop very light. Would be much obliged if you could suggest some certain remedy for this destructive insect, and also advise the name of the plum sent."—The plums referred to in the letter of our correspondent were placed in our hand at the Provincial Show, with the remark that they were sent for a name. The letter was mislaid among some papers, else it should have had earlier attention. The plums sent we believe to be the Bradshaw, but not knowing that they were sent to be measured, we can only state that they were very large. In the September number of the *CANADA FARMER* (page 351) will be found a certain remedy for the curculio.

EVERLASTINGS.—The Everlasting Flowers have of late received a good deal of attention, yet not more than they deserve. A few bunches of Everlastings look unimportant in August, when the garden is made gay by a hundred of Flora's choicest gems; but in the winter, when you desire to decorate for Christmas or New Year, how useful, how beautiful, and how highly prized. We all feel regret when the season of blossoms is over, and we can no more walk in the garden and feast on its beauties. Here we have a class of flowers that will retain their form and colour for years, and their beauty can be enjoyed at all seasons. They make excellent bouquets, wreaths, or any other desirable winter ornament. The flowers should generally be picked as soon as they expand, or a little before, and hung up in small bunches, and so that the stems will dry straight. If the bunches are too large they will mildew. The *Gomphrenas* must not be gathered until fully developed.—*Vick's Floral Guide*.

STRAWBERRY FERTILIZERS.—The following recipe was first tried years since with, apparently, high satisfaction. The growth was vigorous, the crop abundant, and the berries large. It was, therefore, very highly commended as fitted to secure admirable results. Old beds, under the treatment suggested, are said to be even better than new. The proportions are for a bed thirty by forty feet. Commence using the fertilizer when the new leaves are being put forth, and apply it towards night, three times, at intervals of a week between each application. It should be dissolved in thirty gallons of rain or river water. Indeed, if anything be varied from this, let the proportion of water be larger: Nitrate of potash, sulphate of soda, or "Glauber's salts," and sal soda—of each one pound; of muriate of ammonia, one quarter of a pound. Keep the bed well weeded. Tried on old beds, even, the results, as above hinted, are highly gratifying.

Correspondence.

The "Early Rose" in Eastern Ontario.

To the Editor.

SIR,—Some additions must be made to the record of the Early Rose potato this season. It has fully come up to all that has ever been claimed for it as to great productiveness, earliness, and fine appearance and table quality. But in immunity from disease and freedom from rot, it does not come up to its parent variety, the Garnet Chili, nor the newer Goodrich seedlings. And the tenor of your remarks in respect to this variety, under the heading of "Crops in Western Ontario," in a late number, is not altogether sustained by experience with it here. The Early Rose, in this section, in common with the majority of varieties, though not to the same extent, this unfavourable season, and especially where planted late, has received damage from rust and rot to a greater or less degree. Those which ripened and have been housed in time, have escaped to a greater extent.

It, however, remains that the Early Rose is unequalled as an early market variety. But in all points of yield, fine appearance and table quality, and immunity from disease and loss in storage, nothing yet introduced comes up, in my opinion, to the newer Goodrich Seedlings, Early Goodrich, Calico, and Harrison, as winter and late market varieties.

J. F. C.

L. Original, Sept. 22nd, 1869.

Clover as a Restorative.

To the Editor.

SIR,—In a recent number of the CANADA FARMER, I notice an article, signed "Vectis," on "Clover the Great Renewer," and would feel obliged if you would, through your journal, give me replies to the following queries on the subject. 1st. Does the land to be seeded down require to be in good heart? 2nd. Is there any timothy to be mixed with the clover, and is it oats or barley that is understood to be sown with it? 3rd. Do you think that seeding to clover is better than sowing buckwheat and ploughing in before the seed forms?

D. DAVIDSON.

Melbourne, E. T., Quebec.

REPLY.—The better heart the land is in, the better will be the clover, but it is a maxim amongst western farmers, that let the land be ever so bad, or out of heart, if they can once succeed in getting a crop of clover to plough under, by following up the system, fertility is certain to result.

Throughout Western Canada timothy is sown with clover; it ensures a good paying crop of hay, and forms a sod which prevents the poaching of the feet of cattle in wet places. Clover by itself, theoretically,

ought to be the best, but practically timothy is all but universally used.

Clover catches equally well with barley as with oats. Many farmers insist that it is better to sow clover with barley than with any other crop. It rarely takes equally well with oats; they are too thick and shady for it. There is scarcely a comparison to be made between clover and buckwheat. Clover cannot be ploughed under the first year with any profit. It is of little use until the soil is filled with its roots, which are the most beneficial part of the plant: but it takes two years to get a crop of clover into the best condition for ploughing under, whereas buckwheat can be ploughed under as a full green crop the same summer it is sown, and in our warm western lands many farmers manage to get two crops (although not fully grown) ploughed under in one season. But as a permanent renewer, clover is infinitely the best; see Dr. Voelcker's reports quoted previously in this journal.

A GODERICH SUBSCRIBER.—The communication has been received. The editor appreciates the good intentions of the writer, and accepts the hint in the spirit in which it is given; but thinks it would be scarcely possible to carry out the suggestion rigorously without excluding altogether several departments of the journal.

The Canada Farmer.

TORONTO, CANADA, NOV. 15, 1869.

Our Wild Lands.

We have often had to speak of our Wild Lands, the way they have been and are managed, and at the risk of being thought even troublesomely anxious on the subject, we have far too strong an opinion of its importance to allow it for any length of time to drop out of notice. Whatever may have been said to the contrary, it is now beyond all dispute that we have in Ontario, to say nothing at present of other parts of the Dominion, an immense breadth of country still unoccupied, which is well fitted to afford comfortable homes to millions. In its present condition this is of no use whatever, and the chief work of our rulers is to have it settled up by an intelligent and thrifty population. If parts are comparatively barren, let them go if any will have them. In the hands of private parties they may be turned to some account at any rate, and so far pave the way for better districts beyond being taken possession of. A ridge of this sort runs across from the Ottawa to the Georgian Bay with fertile land beyond. Surely that ought not

to stop the onward progress of population. If nobody is willing to take portions of such a country in a gift, why not at any rate have roads pushed through to regions farther north, where there is every reason to believe the country is fertile and inviting.

Our authorities have as yet moved in this matter very cautiously; so cautiously in fact as to be absolutely ridiculous. Would it not be well for them to waken up to the conviction that there is every likelihood of a large addition being next year made to our population, and that it is their duty as it ought to be their pleasure to prepare for it in time? To put simply poor or at least but very inferior land forward as "free grants," while trying to secure money for what is better, is in the last degree short-sighted. This, however, is what is being done, to the grievous injury and ultimate loss of the community. By his narrow policy, Mr. Richards has nearly, if not quite, stopped mining operations. Better far had all such lands as are supposed likely to yield any of the precious metal been given away years ago. Even though neither gold nor lead had in most cases been found yet, for the most part those who purchased ground have tried to do something to extract their own out of their acquired property, and that would have been vastly better than keeping them in the condition in which they are to-day.

The season for immigration is now over, and Mr. Stephen Richards may think he has a right to repose upon his laurels—to rest and be thankful. Instead of this, we know of no time when it is more necessary to be actively on the alert in laying out districts for settlement, and letting all know where they are and how they are to be reached. We are often told about the necessity of retaining the population we have, as well as attracting more. This is the most suitable time for doing a good deal with the object in view. Were there free grants all along the breadth of Ontario, from the Ottawa to the Georgian Bay, and west to Fort William, how many farmers and their sons would be out examining for themselves, about this very time or a little later? The harvest is all over, and those on the outlook for places for their sons and for themselves would choose the present time for prospecting rather than when the country is covered with snow. What is Mr. Richards doing to meet the wishes of this class? He has picked out a few townships, which are not very remarkable for accessibility or fertility, and these, and these only, he has declared shall be open to free settlers. In every

other region there must be payment, or no admittance. Surely this is foolishly short-sighted. We believe that the people who are somewhat accustomed to the country generally, make the best pioneers, though not always. That is the greater reason why they should be as far as possible drafted away northward, and that by the liberal arrangements made for their accommodation. Instead of this, however, we learn that scarcely anything is being done. From the report published recently of a meeting in Peterborough, we learn that Government land unsettled in the front of their property, is a great hindrance to their work of settling the country. Two or three Government townships block up the way. Why so? Are they to be sold or what? Every month's delay is an injury to the country and that without even the shadow of an excuse. If farmers in the front had access to land back from their present places, they could take it up during the fall, and do more or less chopping during the winter, while all within comparatively easy access of not merely settled districts but of their own. Thus instead of the settlement of land stopping during the winter, this season would be, and ought to be, its busiest and most interesting time.

Everyone going back in this way would simply leave so much more room for the immigrants of next year who will, we believe, come in greater numbers and with a larger amount of means than they have done for many years before. By no possibility can this whole question of the settlement of our Wild Lands be made a party matter. It is one which must interest every one who has the good of the Province at heart; and we ought without any delay to have it go forth everywhere that in Ontario at any rate, wherever there are Government lands, there a home can be secured; and on terms the most liberal for any one who is willing to work and reside on the property. We hope the Legislature will urge on the Executive in the matter.

Farmers' Clubs.

The value of a good Farmers' club in any locality is very great. It is easy to get one up, and now that the leisure time of winter is coming, those farmers who take a real interest in the advancement of their profession should lose no time in getting up clubs. A few intelligent, stirring men in each township, ward, or community of settlers can easily start and keep going a good club. When the thing is undertaken, let active men take hold, and

once started, keep up the life of the matter by intelligent and useful discussions on any and all subjects connected with agriculture that may come under their observation. One proved fact is worth a thousand theories. Above all, keep out those noisy fellows who will bring the discussion of political matters into everything they can, in order to subserve their own interest and gain a foothold in some paltry municipality ward election.

The rules need be but few and simple. First a Secretary should be appointed, whose business it will be to keep a book in which to record the names of members and the minutes of each meeting, taking notes of any valuable suggestions or facts that may come out during the discussion. If a school-house or town-hall is near, it may be used for the place of meeting. If not, each can in his turn have the meeting at his house, if he has a room large enough. There should be a chairman for the first meeting, and at each meeting a chairman should be chosen for the next meeting, and the subject of discussion fixed upon. At each meeting, let the chairman commence by giving out the subject to be discussed, and when that is done with, let any member give a new subject, or relate any practical experience he may have met with. They may regulate the times of meeting according to their ability to find subjects to discuss.

A Visit to Moreton Lodge.

About the middle of October we had the pleasure of paying a short visit to the farm of F. W. Stone, Esq., Moreton Lodge Farm, Guelph, the great stock-breeding establishment of Canada. It is situated within one mile of the railroad station at Guelph, and comprises some eight hundred acres, six hundred of which are at the Lodge, and the remainder about three miles further to the south-east, in Pusluch township. The soil is of the rich limestone gravelly loam so prevalent in Wellington county, and is kept in the highest state of cultivation under the management of Mr. Henry Arkell, an Oxfordshire man, who seems to be thoroughly up to his business.

As breeding stock is the principal business, much attention is paid to getting thick and heavy pasturage, and an abundance of roots. About two hundred acres of grain are grown, forty of which are spring wheat, forty peas, sixty oats, and thirty barley, with some rye, which is sown in the fall for early spring pasture, then ploughed up, and followed by rape for late

summer and fall feed. Sixty acres of Swedes and mangolds, and twenty acres of white turnips and lucerne are grown, the rest being in grass, principally clover, and several varieties of English grasses, of which orchard grass seems to be the favourite.

The horses kept are all pure Suffolks, imported from England, of which there are three mares, bred by Sir T. B. Leonard, Essex, and one stallion bred by Thomas Crisp, Butley Abbey, Suffolk, besides some bred by Mr. Stone himself. They are all magnificent animals of a chestnut colour, from 16½ to 17 hands high, seeming capable of doing an immense amount of work, as when we saw the teams at their work of fall ploughing they seemed to get over the ground twice as fast as ordinary horses, and to work with remarkable ease and steadiness. In fact, they are easily broken and good tempered, being ready to work at two years old, without the least trouble in breaking in. They are the finest specimens of the purely agricultural horse we have seen, and those shown by Mr. Stone at London, this year, carried all before them with the judges of horses.

About one hundred and thirty head of cattle are kept, of which an account has been given in our "Notes on Canadian Herds," and five hundred sheep, of which four hundred are Cotswolds and one hundred Southdowns. The Cotswolds are fine animals, and perfectly pure-bred, which is more than we can say of most of that breed we have recently seen at our fairs. The ram now being used won the first prize at Kingston as a shearling in 1867, as also the sweepstakes and the Prince of Wales prize as the best sheep shown, and he seems a noble animal of great size and substance. The Southdowns excited our admiration greatly. No handsomer or more perfect specimens of the breed were ever before seen here. They are originally from the flock of Jonas Webb, of Brabraham, Wilts, and we doubt if any breeder in England can now show finer animals.

Mr. Stone also breeds large numbers of very fine Berkshire swine, Dorking fowls, Aylesbury ducks, and Bremen geese. The birds are all very fine, and although Mr. Stone does not make a practice of showing any of them, they are superior to much that we have seen take prizes at Provincial exhibitions.

The buildings are all of stone, of the most substantial and comfortable description, after the fashion of a first-class English farm steading; and there are several comfortable cottages for the various labourers employed.

Trials of Machinery.

In view of the fact that inventions in labor saving machinery, especially those of a portable nature worked by hand power, are accumulating so fast as to make it a matter of some difficulty for the farmer to judge what is really good in a practical way, and what only differs in immaterial points from old established forms or patterns, with a distinction without a difference more than will entitle the inventor to a patent; and also as a help to judges to come to a just decision upon the merits of the rival inventors, we would again urge the suggestion that our Agricultural Association, which has already done so much to advance the agricultural and mechanical interests of the country, might go a step further than they have yet done, and establish a rule requiring such light implements as seed-sowers, harrows, horse rakes and tedders, straw cutters, fanning-mills, root-slicers, churns, &c., to be put to the test of actual trial at the time of the Exhibition, or any other time most suitable. All need not be tested in one year, but by taking a certain class or classes each year, in the course of four years the whole would be got through with, and new improvements be added to those previously tried, when their turn came next. Such a plan would ensure only those of practical utility being shown.

We want also a ploughing match that will test the practical working capabilities of each model or pattern of plough, rather than the skill of our ploughmen, which has already been well established; and in fact a plough that will do good work without the necessity of being always handled by a skilful workman in order to perform it, is the thing that is wanted most just now. In trials of field implements of all kinds, the dynamometer to test the actual amount of wear and tear of horse power in each implement is a most useful adjunct, that should not be omitted.

Notes on the Weather.

The month of October just passed has been a very fair, though rather cold one, as pretty hard frosts have occurred towards the end of the month, hard enough to make the farmers hurry up in getting in their apples and their root crops. In fact, there will be some loss suffered by those who did not take time by the forelock and get their fruit into barrels as soon as the first hard frost came. In some northern townships the frost came on so suddenly and severely, all at once, that the late ripening spring grain was caught before being cut, or even quite ripened, and much loss will be the consequence.

The mean temperature of the month has been $42^{\circ} 3$, which is $3^{\circ} 5$ below the average. The highest temperature was $69^{\circ} 8$ on the 1st, the lowest $18^{\circ} 7$ on

the 27th. The amount of rain was very small, being but 0.962 inches, but some pretty heavy snow-storms have occurred, giving nearly three inches of snow, there being no less than seven days on which snow fell. There have been but three perfectly clear days, fifteen partially clear, thirteen cloudy days, and twelve days on which rain or snow fell.

The prevailing winds have been westerly, with considerable northerly towards the end.

Editorial Notes

There can be no question but that where root crops are not extensively grown, as in Britain, a summer fallow becomes an absolute necessity as part of the rotation of crops. It not only gives the land a rest for one season, in order somewhat to recuperate, but also enables the farmer to effectually get rid of the weeds that have accumulated in the soil, and to bring up fresh stores of mineral plant food to the surface, which, by exposure to the sun and air, and constant stirring and mixing with the surface soil, render the land in a measure more productive all through a rotation. But a summer fallow, to be good for anything, must be well and thoroughly made, beginning with turning over of the soil in the fall, and ending with the sowing of the wheat the next autumn; and during the interval of the summer between, the soil should remain idle only long enough at a time to give the seeds of all weeds a chance to germinate in order to be destroyed, and a new batch started growing from the next strata, till the soil for several inches in depth has not only been thoroughly stirred and intermixed, but the nucleus of every vile weed in it exterminated.

Col. Waring, of Ogden Farm, Massachusetts, U.S., the author of the best practical work on drainage published in America, and who has, besides thoroughly underdraining his own farm, taken in hand to direct others practically how to do it, says in the October number of the *American Agriculturist* that he has all along employed Irish ditchers to do the work, and found it both a costly and troublesome operation. He finds that they cannot do the work at less than one dollar per rod, without the tile laying, and then they make but ordinary wages; and as they open out the whole length of the drain before laying the tiles, and stand on the bottom to work, the floor of the drain is left by them in a disagreeable state of soft mud in which to lay the tiles. Re-

cently he procured the services of some experienced English ditchers from Canada, and finds not only a wonderful difference between their style of work and that of the Irish labourers, but also that they can dig the drain, lay the tiles and cover them, at 75c. per rod, and yet make over \$5 a day each at the work, and they never touch the bottom with their feet. He says he thinks that if their plan was generally followed of digging, laying and covering a few rods at a time, and men would learn the business so as to follow it as a regular calling, the work would be much better done, as well as at half the cost it now comes to, while the ditchers would make extravagant wages at even 50c. per rod.

We are quite satisfied from our own experience that early cut hay, by which we do not mean clover or grass cut and saved too early, but cut when in full bloom or just past it, before the juices have become turned into woody fibre, and saved in a proper manner, is not only much more relished by stock, but that a less weight of it will keep them in good condition, and that its fattening properties are greater than hay as it has too generally been made. This year, those who commenced haying early have reaped the advantage, as the weather was more favourable at the commencement than it has been latterly.

Last year we cut ten acres of meadow hay, composed of clover and red top, with a considerable sprinkling of timothy, when just past its bloom, and seventeen acres of timothy when the seeds were hard, and some quite ripe. We found that the same weight of the former, when fed out, was greedily eaten up by our stock, while the latter was half wasted, and the stock, sheep particularly, when fed on it fell off in condition—so much so, that we concluded to feed only the former, and sell the latter; and the more so, as the late-cut brought a higher price, not because it was more valuable, but because hotel-keepers, who were the principal buyers, found it lasted longer in their stables, as the poor travellers' horses that were fed on it did not relish it enough to eat much. Our cows, when fed on the early cut hay, gave more and richer milk than when fed late cut hay.

FRUIT AND FLOWER PHOTOGRAPHS.—Mr. D. M. Dewey, of Rochester, N. Y., has sent us some very fine specimens of coloured lithograph plates of fruits and flowers. They are very well done, showing a great improvement on ordinary specimens of the kind. He keeps a large stock on hand to supply nursery men and agents, who can obtain full catalogue lists of his stock on application to him by mail.

Poultry Yard.

Prizes for French Fowls.

To the Editor.

Sir,—In the prize list of the late Provincial Exhibition, under the heading "Poultry" I read, "Houdans, or other French Fowls, First Prize \$1.00," which I interpreted, \$1.00 to each of the three varieties, Houdans, Creve Coeurs, and La Fleche; to my surprise, however, on arriving at the Exhibition, I found that the fowls alluded to were all clumped together, and but two prizes given to the three varieties, both of which were awarded to the Houdans—the Creve Coeurs, and some good specimens were exhibited, being passed over without notice. There were no La Fleche.

Now, Sir, these same varieties of fowls are represented to be of great merit, and from experience in keeping two of them, Houdans and Creve Coeurs, I believe them to be decided acquisitions to the poultry yard, being abundant layers of large eggs, non-sitters, as chickens maturing very early, equal, and by some considered superior, to the Dorking for table, and with me, perfectly hardy; in a few words, they are thoroughly useful fowls.

Now, to each of the varieties of the Polands, Hamburgs, &c., which, I am of opinion, ought to be classed as ornamental, rather than useful fowls, a separate prize was offered. My reason for writing is to elicit information as to the reason of this, as it appears to me, decided and unjust.

Again, if the merits of poultry are supposed to be at all commensurate with their money value, I may state that I possess a pair of Creve Coeurs, the parents of which were readily sold, to my certain knowledge, for fifty dollars.

To prevent my motives, in upholding the rights of the French breeds, being misconstrued, I will state that I was not an exhibitor at London; had I been, however, I could not have viewed with more dissatisfaction the management to which I have alluded, and consider, that with equal propriety and consistency, we ought to read in the next prize list, "Dorkings, or other English Fowl, First Prize, \$1.00."

JUSTITIA.

NOTE BY EDITOR.—It seems clear that the prize list was sufficiently explicit in the matter of which our correspondent complains, and that his interpretation was not warranted by the terms. Whatever may be the value of the French breeds of poultry, and we are not disposed to underrate them, they have certainly hitherto found little favour with Canadian fanciers, and at the exhibitions of the Ontario Poultry Association have been very slenderly, and sometimes not at all, represented. It was quite natural, therefore, that the Agricultural Association should not set aside any large proportion of prize money for breeds in which they could not expect much competition. At the last spring exhibi-

tion of the Ontario Poultry Association the classification was precisely the same, the French varieties being included in one class. No doubt if circumstances require a change in future, such change will be made, and we are glad to receive and publish our correspondent's account of his experience in raising these breeds of fowl.

Influence of Climate on Plumage.

To the Editor.

Sir,—I enclose a feather of a Dun Pigeon—it will be curious to mark the effect the climate has had upon the plumage, leaving a white margin almost around it. I have noticed this same effect in England, but not to so great an extent. I find fowls affected towards moulting time, much in the same way, and the Wild Turkey even moulting darker



than the old feathers. Taking all these facts into consideration, judges at shows should exercise discretion with regard to the points for plumage at autumnal exhibitions. People not aware of the effect of climate and light are very apt to be deceived in purchasing birds affected by this cause.

The bills, also, of Aylesbury ducks and Emden geese suffer much from exposure to the sun. Birds intended for Exhibition should be sheltered during the very hot sun, and kept dark or in shade. But no amount of sun will bring black spots, which are a decided disqualification. These may, even in young specimens, be detected under the skin, of a reddish colour, and thus you are enabled to select those with pure-coloured bills, and reject the others for exhibition or breeding, making use of them for the table.

But in spite of every inattention, a pure Aylesbury duck will never get the orange bill of a call duck; a fact which should be impressed on inexperienced purchasers, because no common duck can compete in any way with an Aylesbury. Apropos to this, I was glad to see your reply to a Democrat in the fowl line, in your last number; he wishes to level us all. I wrote something about this in March, but I suppose he did not read or heed it, and hope now he is convinced. I sincerely trust the old hen will lay on for ever. I have no wish to see "grade fowls as a class," although for the cross they are sometimes advantageous; but if you keep pure breeds, the faulty do for market, and the extra good in prizes and eggs pay the expenses of all the rest, and often with a profit.

Oct. 21st, 1869.

F. C. H.

Treatment of Gapes.

I have observed a letter from Mr. Power, a surgeon of the 13th, on the treatment of the gapes. I have seen the worm extracted with a wire, and some survived, whilst many "succumbed" to the operation. I have frequently adopted the following method with

success, and it requires neither practised fingers nor a very active brain. I sprinkle about an ordinary teaspoonful of quicklime on the boarded floor of a hen coop, and I shut the affected birds up, giving a little ventilation at the top. I have frequently found all the sufferers convalescent in the morning, and in a few days they are merely a trifle weaker than the rest.—Cor. Fall.

Poultry Queries.

To the Editor.

Sir,—Allow me to submit the following queries: 1st. Can a cheap book or pamphlet be obtained in Canada containing the standard of excellence of poultry as adopted by the Ontario Poultry Association? I have seen a pamphlet by the New York Poultry Association; if we had such, it would be very useful at our small county fairs in judging poultry; also in giving small poultry fanciers an idea how to match their birds for exhibition without paying from three to five dollars for a standard work on poultry, which is more than most poultry fanciers in a small way like to pay.

2nd. When should a young game cock be dabbled, or can it be done at any age?

3rd. What are the terms to become a member of the Ontario Poultry Association?

POULTRY.

ANS.—1. The "Standard of Excellence," in pamphlet form, as published by the London Poultry Club, and which is the standard adopted by the Ontario Poultry Association, can be obtained at a moderate price from any of the principal booksellers in the city.

2. A cock should be dabbled as soon as the comb and wattles are fully developed, which is about the same time as the bird attains complete male plumage. The object of the operation is to remove the most prominent and vulnerable points of attack; an undabbled bird is at a great disadvantage against a dabbled opponent, and the cocks will fight. The dabbling is therefore in truth a humane precaution.

3. An entrance fee of \$2 and an annual subscription of \$1. Apply to the Secretary, T. McLean, Esq., Box 25, P. O., Toronto.

NEW YORK POULTRY SHOW.—The New York State Poultry Society, encouraged by the success of its spring show, is now issuing circulars and preparing for another to be held at the same place, the Empire Skating Rink, beginning on the 1st day of December and continuing to the 9th. This building will be heated by steam. In addition to a show of poultry, both useful and ornamental, land and water fowls, together with pigeons of all sorts, and animal pens of every name, from ponies to cats and dogs, including rabbits, Guinea pigs, &c., the Society offers prizes for fish propagating apparatus, and the best illustrations of fish-breeding now practised. The prizes offered are gold, silver, and bronze medals, of different sizes and values, and the best works on poultry &c. Mr. Geo. H. Warner, of New York Mills, is President, and Daniel H. Gavitt Secretary.

Entomology.

A Collection of Insects.

Mr. J. M. Bristol, of Virgil, Niagara Township, Ont., has sent quite a collection of insects to our office, which we presume—as they were unaccompanied by any note—he desires us to name for him. To give anything approaching a full account of them would occupy much more of our space than we can spare at once; we shall, therefore, merely give him the names of the specimens with such slight description as will, we trust, enable him to recognise which we mean. When any variety of specimens are sent for identification, it is well to attach a separate number to each, keeping a duplicate with a similar number attached for reference; the necessity for a lengthened description is thus obviated, and identification is rendered more certain.

1. The two large clear-winged insects, black varied with dark green above, and powdered with white beneath, are both female specimens of the *Cicada thibica*, Linn., sometimes called "Harvest flies," or "Heat-singers," from the shrill whizzing noise made during the hottest time of the day by the abdominal drums of the males, (See CANADA FARMER, 1866, p. 309.)

2. The two curious empty cases are the discarded pupa cases of this Cicada. Just before attaining the winged state, the insect emerges from the ground, where it has lived during its larval condition, and crawls a little way up a tree; then, fixing its claws tightly into the crevices of the bark, it splits its skin open down the back, and withdraws itself as a hand from a glove, leaving the hard empty shell behind. These empty cases are very commonly met with on trees during the latter part of summer.

3. The three large clay-coloured beetles, with three round black spots near the outside margin of each wing-cover, and a similar spot on each side of the thorax, are specimens of the Spotted Pelidnota (*P. punctata*, Linn.). These big beetles are sometimes very destructive to the foliage of grape vines; being so large, however, they are easily seen, and can be picked off and destroyed without much difficulty. They do not occur on the north of Lake Ontario, but are common in the southern and western counties.

4. Five specimens of the large dusty-looking Snout-beetle, or Curculio, (*Lixus concavus*, Say.) which we mentioned in the March number (p. 95) of the CANADA FARMER, as having received from Mr. Bristol the previous year. Till that time it was not known to occur in Canada. We should be glad to learn under what circumstances the specimens of it were captured, as little or nothing is known of its natural history. We are very much obliged to our correspondent for this supply of specimens; it will enable us to complete our series and also supply a brother entomologist with a sample.

5. The three little Snout-beetles are specimens of that most pestilent creature, the notorious Plum-Curculio (*Conotrachelus nemphar*, Herbst.).

6. The single specimen of an oblong oval, somewhat ash-coloured beetle, with a coppery lustre, especially on the under side, is the Divaricated Buprestis (*Dicera divaricata*, Say); an insect much allied to the Apple-tree Buprestis Borer. It affects the beech, cherry, and probably other trees.

7. The six brilliant golden-green beetles that present a dazzlingly beautiful appearance in the sunshine, are specimens of the Golden Chrysomellan (*Eumolpus auratus*, Fab.). They feed on the leaves of the common Dog's-bane (*Apocynum*).

8. The large four-winged fly, with the three immensely long, stiff ovipositors, is a species of ichneumon, that deposits its eggs in the bodies of various wood-eating grubs, thrusting its slender appendages through the bark of the tree and into the animal within. It is called the *Rhyssa lanator*, Fab. The male insect is, of course, destitute of these long appendages and presents a very different appearance.

9. The smoky-winged fly with a rusty coloured body is another ichneumon (*Trogus exesorius*, Brullé) that attacks the parasitic caterpillar of the Black Swallow-tail Butterfly (*Papilio asterias*, Cramer).

10. The pretty soft white and gray moth is called the Velleda Lappet Moth (*Tolype Velleda*, Storr.); its caterpillar feeds upon the leaves of the apple, but is so rare that it cannot be reckoned amongst the injurious insects.

11. The five curious shaped bugs belong to species of the *Reduvius* family of true bugs. They are all cannibals, and prey upon many different kinds of other insects that are destructive to vegetation. They are, therefore, to be included in the list of our insect friends.

Our correspondent has been so successful in collecting that we trust he is forming a cabinet of Canadian insects, and observing their habits, transformation, etc.; if so, he must find that he is entering upon a most interesting field of study, and one that cannot fail to delight and instruct him very much. We shall be happy at any time to name specimens, or render him any other assistance that may be in our power.

Killing Apple-Worms by Machinery.

The world certainly moves! Men are constantly making discoveries, which though trivial in themselves, greatly benefit their fellow-men. The hay-band remedy against the Apple-worm (*Carpocapsa pomonella*, Linn.) is an excellent one, but we are obliged to seek for the worms which spin up under it, and crush each one separately. Mr. D. N. Brown, an enterprising fruit-grower of St. Joseph, Mich., has however devised a plan of slaughtering them wholesale, which commends itself to the good sense of every apple-

grower. Here it is, as given in a late number of the *St. Joseph Herald*, by our friend and correspondent, L. P. Haskell of that place:

"Place early in June, rags, not hay bands, in the forks of the tree, or trunk below the lower limb, and in these the larvæ will secrete themselves to enter the chrysalis state. Once in two weeks remove these rags, and destroy the insects. Mr. Brown does it very quickly and effectively by passing the rags through a clothes-wringer. In this manner the better the nuisance may be got rid of; and yet no effort will be useless unless every owner of an orchard does the same thing. There must be united effort. Let every man feel it his duty to urge his neighbour to act at once and persistently, remembering that 'eternal vigilance is the price of'—good fruit."
—*American Entomologist*.

Corn Worms.

Our esteemed friend Mr. C. V. Riley, State Entomologist of Missouri, and junior editor of the *American Entomologist*, mentioned in a recent letter that the "Cut-worm on Corn," sent us by Mr. Farewell (CANADA FARMER, Sept. 15, p. 239), is probably the larva of either *Heliothis armigera*, Hüb., or *Geortyza zea*, Harris. The worm found in the tassel and stalk he suspects to be the latter, while those observed by Mr. Farewell in Nebraska, eating the tops of the ears, were the former species, as he has himself observed it in the neighbourhood of Omaha. Neither of these insects has as yet been included in the list of Canadian moths, nor have they been taken, so far as we are aware, by any of our collectors. Though familiar with them in the immature state from specimens received from the United States, we have had no experience with them in their earlier condition.

The Pea Weevil.

We lately received a sample of peas from Mr. Bowles, of Quebec, which he states are specimens of a car-load brought from the Western States to Acton, Eastern Townships, P. Q. Three-fourths of the whole quantity are said to be affected in the same manner as those sent us,—viz: hollowed out and with a round hole on the circumference through which the head of a small insect is peeping out. The insect thus snugly enclosed in the pea, one specimen occupying each, is a small snout beetle belonging to the family *Curculionidae*, and called the Pea Weevil (*Bruchus pisi*, Linn.). For a full description and figure of this pest, see the CANADA FARMER for March 15, 1866, page 87. The best mode of destroying it is to immerse the peas for one minute in boiling water; this will kill the beetle and not destroy the vitality of the seed; four minutes in boiling water will cook the seed so much as to kill the germ, therefore care must be exercised in applying this remedy. If the peas are intended as food for hogs, they should be kept in a close bin and boiled

before using: or else they should be ground, beetles and all. Hogs would probably experience no ill effect from such food, but we should fear that so large a proportion of "bugs" would not agree with the more delicate digestive powers of horses or cattle. If they are intended for seed they should, most certainly, be immersed for a minute in boiling water, else the crop will be just as "buggy" as the seed. The peasent us have lost about one-half their weight of nutritive matter, and, in our opinion, the whole of their commercial value, being more calculated to propagate a pest than to be of any satisfactory use. The shipper of them deserves to be prosecuted.

Sphinx Caterpillar.

(To the Editor.)

SIR,—Enclosed you will find a large worm, being one of two that I caught on an apple tree (Transcendant Crab) just beside a bed of tomatoes. From its appearance I suppose it to be the formidable Tomato Worm, of which there are so many dreadful accounts in newspapers. I would very much like to know whether it is the worm in question, and whether you consider the popular notion of its sting being fatal has any foundation.

DANIEL STEWART.

Ainleyville, Oct. 7th, 1869.

NOTE BY ED.—The large worm, referred to in the foregoing communication, came safely to hand packed in a very ingeniously constructed light wooden box; it is a specimen of the Plum Sphinx Caterpillar (*S. drupiferarum*, Smith and Abbot). It is a closely allied species to the notorious Tomato Worm, and is just as harmless as we believe that species to be. For further remarks on this subject we refer our correspondent to our recent article entitled "Poisonous Worms again," as well as to a previous one (CANADA FARMER, Aug. 15th, 1869, page 295) on "Popular Entomology."

THE CANADIAN ENTOMOLOGIST.—In our recent notice of this periodical we mentioned inadvertently, that the price is fifty cents per annum. That was the rate for the first volume: but as the numbers of the second volume are doubled in size and otherwise much improved, the price is now one dollar per volume of twelve numbers. Subscriptions and communications should be addressed to the Rev. C. J. S. Bethune, Credit, Ont.

CUT-WORM TRAP.—We have been much interested in a suggestion of D. N. Brown, (who, by the way, is one of the practical men, and not a hobby-riding theorist), for the prevention of injury to grape vines, and especially young ones, and also of young blackberry plants. He simply digs a hole on one side of the plant, close to it, and as the cut-worm is a very clumsy insect, in his effort to reach the plant he falls into this hole. He has found in the morning as many as twenty in one hole. In setting out the grape vine, he makes a hole the width of a spade and six inches deep.—*St. Joseph (Mich.) Herald.*

Apiary.

Honey Extracting Machine.

I have been frequently asked for my opinion of the Honey Extractor, and will now give it for the benefit of all.

As the Honey Extractor has been before the public but a short time, it may be well to give a description of it. It was invented in Germany, and is a machine for extracting the honey from the comb without destroying or breaking the comb. It is usually made of wood, tin, or zinc, and consists of a tub or box, twenty inches in diameter, and about two feet deep, in which there is a frame for the purpose of holding the combs, and which is made to revolve, by gearing, with considerable velocity. The combs are so fixed, that by their rapid revolution the honey in the cells is thrown out by centrifugal force. Hence it has obtained the name of a "Centrifugal Comb Emptying Machine."

As already remarked, it was invented in Germany, and introduced into the United States by L. S. Langstroth, who claims to have made some improvement on the German machine. Within the last year several machines have been constructed by different persons, varying slightly from the Langstroth pattern. About the time Mr. Langstroth introduced the machine into the United States, a Mr. Crydenman, of Ontario, hearing of the machine, set to work and constructed one, for which he obtained letters patent. Though I have never seen it, yet from the description given by those who have seen it, I conclude it is a very good one. Although much was said in favour of these machines, I for some time questioned, in my own mind, their utility, but refrained from expressing any opinion until I could test the machine and speak from experience. This I can now do. This season I obtained a machine, constructed after the Langstroth pattern, and found that it worked exceedingly well, as regards extracting the honey without injury to the combs, though the machine itself was faulty in some respects. I found, as I had expected, that if combs were emptied containing larvæ unsealed, the larvæ were disturbed and thrown out, but eggs or sealed larvæ were not affected in the least.

The mode of proceeding is as follows: The combs being removed from the hive and the honey cells, if capped over, uncapped by shaving off the caps with a thin honey-knife, are placed in the machine in a natural or upright position; then by turning a crank they are revolved, and the honey is thrown out of the cells from one side of the combs the combs are then reversed, and a second turning of the crank empties the other side.

The combs are not injured in the least, but may be again placed in the hive. The bees finding them empty will at once set to work to refill them, and if forage is abundant they will be filled again in an almost incredibly

short time. The honey requires to be strained through a cloth when it is very fine.

It will readily be seen that the machine is of no use to those using box hives, but to those using frame hives I must say, after having thoroughly tested it, that it works admirably. By its use stocks that refuse to store honey in surplus boxes can be made to yield from twenty-five to thirty pounds in any ordinary season. True, the bee-keeper must be able to remove the frames from the hive, and uncap the honey if it is capped over, but a child can work the machine and extract the honey after the combs are placed in it. It will also be necessary to use some judgment, and not take honey from the combs too late in the season. The combs taken from the hive should generally be the outside combs, as they contain more honey and are not so likely to contain young brood. Quite late this season I removed seventeen pounds from two cards of comb taken from one hive at one time; from other two hives I did the same, and they have filled up again; from either of these stocks I should not have received one ounce of honey in boxes, and had I commenced earlier in the season I might have taken double the amount. I have very materially improved the machine, and intend to have them for sale next season, when they will be advertised in the GLOBE and CANADA FARMER. The machines will generally cost from eight to ten dollars, and if properly constructed, after having served their purpose as honey extractors, will be found just the thing needed by the "good wife" for keeping her bread and cake in. J. H. THOMAS.

Cheap Bee Feeder.

Here is a description of one I have used, which costs no more than twelve and a half cents, and which any tinsmith can make. Take a piece of tin, ten inches square, and make with it a square pan, one and a half inches deep; after it is wired, punch a hole through the bottom with an inch or inch and a half hollow punch, and make a tube to fit, one inch long; turn a burr on the bottom end, slip it into the pan from the bottom and solder it tight; now cover one-third of the pan with a piece of tin, it may be cut nearly the size of the pan, then lay it on the top of the pan and solder it on; through this tin there should be a small hole punched to receive a funnel: cover the other half of the pan with a piece of glass. Little hooks of tin should be soldered on so the glass can slip on or off, and your feeder is complete. How to use it: first slip out the glass and put in some small pieces of comb, put in the glass and insert a funnel in the small hole made through the tin in the top of the pan, and turn in your feed, less or more, so that it does not rise above the tin tube, remove the funnel and put a cork in the hole. Now take off your honey box and set the feeder over the hole in your honey board. The bees will at once rush into the feeder, but cannot escape. The glass enables you to see when the feeder is empty, and by removing the cork you can feed without disturbing the bees in the least. Brooklin, Ont. J. H. THOMAS.

Household.

Domestic Manufacture of Furs.

That furs are not more generally used by both sexes in this country is doubtless because of their expensiveness, and not from want of appreciation of their great utility, richness and beauty. It is no extravagance to assert that every farmer's family may furnish their own fur collars, gloves, robes, and other articles of dress and ornament, with trifling expense, from the resources within their own reach; but from want of more knowledge on this subject valuable skins are wasted or disposed of for a mere fraction of their real value, and articles of apparel that should have been made from them are bought at extravagant prices of fur dealers.

The skins of racoons, minks, muskrats, rabbits, foxes, deer, cats, dogs, woodchucks, and skunks, are all valuable. Handsome robes may be made of the skins of the last two animals, and the writer has seen fur coats made from the skins of woodchucks, well tanned, dyed and trimmed, which were elegant and comfortable, and no one but a connoisseur would guess their origin. Of the finer and nicer furs, beautiful collars, muffs, cuffs, caps, gloves, and trimming may be made with a little ingenuity and perseverance; and who would not feel great satisfaction in wearing a nice article from the fact that it was something of their own manufacture, a product of their own taste and genius?

Very handsome floor mats are made by tanning sheep pelts and then dyeing them some bright colour, which is done with very little trouble, the art of dyeing is now so familiar to almost every household. Furs may be dyed as easily as woollen goods, notwithstanding the impression that it is an art known only to the trade. Any dye that will colour woollens will also dye furs, only care must be taken not to have the dye too hot, or the texture of the skin will be injured.

The mode of tanning usually followed by city furriers is to rub the skins well with rancid butter, then tread them thoroughly in a tub or vat, after which a large quantity of sawdust is mixed with them, and the process of treading continued until all the grease is absorbed, when they are finished off by beating, working, and rubbing with chalk and potter's clay, whipping and brushing.

An old trapper practised this method with small skins, first washing with a suds of soap and sal-soda to free them from grease, then rinsing in clear water to cleanse them from the suds, then rubbing as dry as possible, after which they were put into a mixture of two ounces of salt to a quart of water, added to three quarts of milk or bran water, containing one ounce of best sulphuric acid, and stirred briskly for forty or fifty minutes; from this they are taken dripping into a strong solution of sal-soda and stirred till they will no longer foam; they are then

hung to dry, and when nearly dry are taken down and rubbed dry, when they are very soft and pliable.

A very good and simple process in use among farmers is to sprinkle the flesh side, after scraping it well, with equal parts of pulverized alum and salt, or washing it well with a strong solution of the same, then folding the flesh side together, and rolling it compactly, in which state it should remain for eight or ten days; then it is opened, sprinkled with bran or sawdust to absorb the moisture, and rolled up again, and after remaining twenty-four hours the process is completed by thorough rubbing and manipulation, on which the pliability depends. Skins when taken off should be freed from grease or flesh, by thorough scraping, when they may be dried and left to await the leisure of the owner. Previous to tanning they must be well soaked and wrung dry.—*American Artisan.*

Earth Closets.

A correspondent of the *Country Gentleman* sends the following account of his method of applying the dry earth system in his own domestic establishment.

The house is built in the usual manner. Under the seats I have a drawer made of two inch stuff, put together with brown paper and white lead, made so that it can be drawn out at one end of the house. I cover the bottom of the drawer with about three inches of dry earth and then sprinkle a shovelful of plaster over it. The drawer is cleaned out once a week, and the contents go to increase my manure pile. So far, I have not found any smell coming from the arrangement, although we have had a pretty hot summer, and the privy is within fifteen feet of my house. The drawer runs on two slides, and when in place is covered on the ends by doors.

This is my earth closet. An improvement would be to have a box in each compartment full of dry earth, and a scoop, so that more earth could be thrown on from time to time. As yet I have not found this at all necessary.

FILL LAMPS IN THE MORNING.—Scarcely a week passes but we read accounts of frightful accidents from kerosene lamps exploding and killing, or scarring for life women and children. A simple knowledge of the inflammable nature of the fluid will probably put a stop to nearly all the accidents. As the oil burns down into the lamp, a highly inflammable gas gathers over its surface, and as the oil decreases the gas increases. When the oil is nearly consumed a slight jar will often inflame the gas, and an explosion is sure to follow—death and destruction. A bomb-shell is no more to be dreaded. Now, if the lamp is not allowed to burn more than half-way down, such accidents are almost impossible. Always fill your lamps every morning; then you never need fear an explosion.—*Ex.*

Agricultural Intelligence.

Wentworth and Hamilton Agricultural Exhibition.

This Exhibition was held on the Crystal Palace grounds, Oct. 13th and 14th. The first day was fair, but the second day, on which the stock was brought in and the public admitted, was so cold and wet that many animals entered failed to come in, and except for a short time in the afternoon when the sun shone out, there were but few visitors. Owing to the bad weather the judges did not get through till near the time for closing, and many animals were taken home directly after undergoing the judges' inspection.

Horses. Judges, Jacob Young, York, J. Cornworth, Paris, Mr. Servos, Niagara. 161 entries, but scarcely half were to be seen. The heavy draught class was a good one, the first prize stallion, a dark dapple brown owned by A. Harvie, seemed a fine one. The first prize mare and foal, a chestnut belonging to R. Calder, of Ancaster, are as good as could be seen. The first prize three year old filly, owned by the same person, was a fine one, but the second prize filly, owned by R. Smith, Glanford, seemed to be the heavier and better animal of the two, and would have been placed first had she come in a little earlier. Hendrie and Co., G. W. R., got the first prize on team horses for a very heavy pair. The matched carriage teams were a fair lot, but rather too light; the heaviest team, a pair of chestnuts owned by C. Vansickle, Beverly, took first prize, although we fancied a pair of three year old black mares, owned by S. Hammill, Ancaster, were the best of the lot, but the judges thought them too young. In the sweepstakes for best stallion on the ground, the prize went to a fine black Roadster, owned by J. Dochstader, Cayuga, Haldimand Co. Take them all through, there has seldom been a better lot shown at this Society's Exhibition, though we thought the agricultural class getting rather too light weighted for modern farm work.

CATTLE. 132 entries, of which fifty-five were Shorthorns, fifty-eight grades, eight Ayrshires, eight Galloways, five Devons. Judges, John Snell, Edmonton, John Peters, London, Jas. Vine, St. Catharines, for Shorthorns and grades. John Cotter, D. Alton, Nelson, J. Anderson, Louth, in the other classes. Some good Shorthorns were shown by Thomas Stock, J. H. Anderson, West Flamboro, and S. Douglass, East Flamboro, who took most of the prizes. George Roach, Hamilton, got first prize for a bull calf, and Joshua Freeman, Nelson, carried off the sweepstakes with aged bull, "Halton." Most of them were not in show condition. The grades were a fair class, but we noticed no animals of remarkable excellence, although they seemed generally to be in better flesh than the pure-bred Shorthorns.

SHEEP. 197 entries. Judges, in Long-wools, Wm. Douglass, Onondaga, James Lawrie, St. Catharines. In medium and fine wools, Jas. Bessy, St. Catharines, E. Jones, Stamford. The majority were longwools, seemingly considerably mixed; in fact, we could see but very few pure-bred animals among them, The Southdowns, Shropshires, and Merinoes, were better, and were a decided improvement on former shows.

PIGS. 21 entries. Judges, John Currie, Culloden, James Brown, Niagara. As might be expected, though there were not many, the swine were particularly good. George Roach had several Essex and Suffolks, and H. J. Lawrie, Berkshires, and took the lion's share of the prizes.

POULTRY. 45 entries. Judges, G. J. Miller, Niagara, J. Bogue, London, J. Mihiinnick, Wellington Square. Owing to the fact of the poultry department being hid away in the old regimental cook house, neither we, nor probably anyone else but the exhibitors and judges, could find them till they were being removed from the grounds, and so we can say nothing about them.

GRAIN AND SEEDS. 137 entries. A very fair show, the first prize wheat and barley being extra good. John Hamilton, Strabane, was awarded first prize for both white and red winter wheat, but after the judges had left it was discovered that he had practised an imposition by having a very inferior article as the bulk of his bags, a half bushel or so of extra good wheat having been placed at the top, and the prizes are to be withheld from him. Mr. Hay, of Waterdown, who got the Canada Company's prize at London, took second here.

DAIRY. There were fourteen samples of packed butter, and the first prize sample, belonging to Mrs. G. M. Howell, Ancaster, seemed to us to be really good. Twenty of roll butter; the prize butter here was too salt for our taste. In cheese, J. C. Aikman, Ancaster, took all the prizes for factory, and R. Calder, Ancaster, for dairy. They did not seem to be very good, the factory being strong in flavour, and the dairy-made too sour.

AGRICULTURAL IMPLEMENTS. There were but few on the ground, and nothing new about any of them that we could see.

VEGETABLES. 160 entries. The farmers' part of the show of vegetables was small and mediocre, except in carrots, turnips, and potatoes, which were very well grown. There were no less than forty-three samples of potatoes. But in garden vegetables there was a show that we have rarely, if ever, seen excelled anywhere, and the Hamilton gardeners deserve great credit for the good quality and form of their productions in the vegetable line.

FRUIT. 204 entries. Judges, W. H. Mills, C. Meston, and W. Holton, of Hamilton. The show of fruit was splendid in every respect, except grapes, of which there were but few. We counted eight collections of apples,

twenty varieties in each; twenty-seven of cooking apples, twelve in each; eighteen of dessert, twelve in each; eighteen plates of apples in the three variety section; eighteen of pears, three varieties each; twenty-eight of pears, twelve in each; six of quince, nine of plums, ten of peaches, twenty-one of grapes. In black grapes, Israella took first prize, and in brown, Delaware. There were several fine samples of well ripened Delaware, but none of the other grapes amounted to much.

PORTABLE AND DOMESTIC LABOR-SAVING IMPLEMENTS. There were not many beyond the usual array of sewing machines, but we noticed some novelties; Harris' Champion Churn, a combination of the dasher churn worked by a revolving motion given from a winch. Canadian Spinning Machine of Freeman Green, Stony Creek, a cheap and simple thing, costing only seven dollars, that seems to be just what is required by the farmer's wife who spins at home. A rocking chair and cradle combined, by Jacob Zingshiem, Hamilton, that one can sit in and rock the baby at the same time. A quilting frame by Jarvis J. Dale, London. John Coombs and Son, Bartonville, showed a new style of door fastener to be used on barns, stables, sheds, &c.

LADIES' DEPARTMENT, as might be expected, was well filled, and the ladies of Hamilton are not behindhand in showing most superb specimens of their handiwork, both in this and the fine arts department, which was very creditable.

West Northumberland Fall Show.

The annual exhibition of the West Northumberland Agricultural Society was held at Cobourg on the 19th and 20th of October, and exceeded in extent and interest any of the former shows. The entries were about 1200 (more by 209 than last year), and the amount taken at the door about \$31.

The stock and implements were shown in a field south of the railway station, and the indoor department in Victoria Hall. The horses, though not so numerous as in some former years, were very good, some fine farm and carriage teams being shown, also single buggy and saddle horses. There was a fine display of one and two-year olds, as well as mares and foals.

In cattle, of which there were about a hundred head of all kinds on the ground,—Messrs. Wm. and George Isaacs, of Haldimand Plains, showed some very fine Shorthorns, the best on the ground. These breeders have now—with importation and purchases here—a fine herd of this class. There was a fine show of Ayrshires on the ground, Messrs. Pratt, Wright, and Newton being the principal exhibitors. Of Devon there was about the usual number; but only a single solitary specimen of the Galloway breed. The show of grades was large and good, principally Durham grades.

There were good lots of long-wooled sheep from the flocks of Mr. Evers, Callis, Harris, Lean, Reynolds, and others. In Southdowns the principal exhibitors were Messrs. Burnham and Eagleson; and in Merinos, Messrs. Hinman and Spears. Of Cheviots there was a fine lot on the ground from the flocks of Messrs. Elliot and Caruthers.

Pigs and poultry were exhibited in about usual numbers, and of good quality. The show of implements was a little better than last year, but very far from what our mechanics ought to make it, and can make it if they choose. There was some fine harness shown, both for team and carriage harness.

The indoor department of the show was in Victoria Hall, and large as the building is it was filled to overflowing, the north end being occupied by grain, seeds, and roots; the south end with fine arts and ladies' department, and the three tables on the floor of hall with fruit, &c., &c.

The grain was remarkably fine; it was frequently remarked by visitors that they had never seen such a show of grain. There were thirty-two lots of wheat, sixteen of barley, twenty of oats, seven of peas, twelve of white beans, seven of Indian corn, besides turnips, timothy, clover, mangold-wurtzel, and carrot seeds; there were also shown as extras in this class, a bag of tares and some alsike clover seed. Though the show of grains was very good, it was rather surpassed by the show of roots: the potatoes, turnips, mangolds, carrots, beets, cabbages, &c., were remarkable for large size and fine quality. While not so large in numbers, they certainly surpassed in quality those shown at the late Provincial Exhibition, and must have tested the skill of the judges to decide which was best. There was a good display of apples, one exhibitor showing forty-two varieties, and some others, very fine collections. Mr. Losseshow showed samples of California pears and apples, that were much admired. There were good specimens of table and winter apples shown. The grapes were scarcely as good as usual, showing that though the season had been good for grains and roots, it had not been so favourable for grapes.

In articles of home manufacture there was a good display of fulled cloth and flannel, both home and factory made; also socks, stockings, mitts, gloves and woollen yarn, all fine and good; quilts in all the usual varieties, in piece, patch, and knitting, in silk, cotton and woollen, giving a high idea of the skill, patience, and industry of the fair makers; but the limits of a brief report preclude the possibility of more than a passing notice of the many choice articles in this department; and at any rate they must have been seen to be duly admired and appreciated.

In the dairy department there was a small but good show of cheese, and a very large and fine show of butter. There was also some honey and maple sugar, good and sweet, it is presumed, as usual.

Trafalgar Township Show.

This Township Agricultural Society is one of the largest and most flourishing in the country. It has 396 paid up members, and the entries at its show held at Palermo, Oct 5th and 6th, numbered 1011. The weather was delightful, and not less than 2,000 people attended on the second day.

The stock departments were well filled, better than is usually seen at a township show. Horses, 107 entries, mostly young animals, and none of particular excellence. There are evidently too many "Cheap Jack" stallions used in Trafalgar now. There were 62 entries of cattle, of which 20 were pure-bred short-horns, the rest mostly grades; James White, H. Robinson, J. Weatherston, D. Alton and W. C. Beatty showing good specimens of cows and heifers. Mr. J. Bussell's red bull calf by Rufus [618] from Strawberry, got the first prize, and seemed a neat wellshaped animal. Of sheep there were over 100 on the ground, mostly Leicesters and Cotswolds. It was noticeable that they were considerably mixed and many showed a cross of Lincoln. James Main, Squire Wilson, J. C. Earle, J. D. Alton got several prizes. Messrs. Earl and Main showed Southdowns. D. Alton showed a couple of Hampshire Downes for which he got special prizes. Some good swine were shown by J. Main and J. Ford; they were all Suffolks except one Berkshire and two or three Chester Whites. The prize list for poultry being pretty large and liberal, quite a number of good birds were shown. John Wray got first prize in Black Spanish and Game, with some really good birds; James Main in Brahmas and Polands as well as some in Spanish and Game; also for ducks and geese.

Of grain there was a good show of samples, and the first prize fall wheat seemed of fine quality. In barley the first prize was given to two-rowed. The vegetables were not so numerous as might be expected, nor were they of as good quality as usual. Of fruit there was a most magnificent display, and what is more, great pains had been taken to label everything, which is a great help to growers in discovering what kinds succeed best. There were 141 entries of apples alone, about 20 of pears, 20 of grapes. Dr. Buck got first prize for a collection of pears of sixteen varieties; among them were Flemish Beauty, Bartlett, Tyson, Osband Summer, Steven's Genesee, Onondaga, Duchess d'Angouleme, Louise Bonne de Jersey, Belle Lucrative, Laster Beurre, Vicar of Winkfield, White Doyenne. H. M. Switzer got first prize for a collection of 11 varieties of open air grapes; among them were Sweetwater, Delaware, Hartford Prolific, Ontario, Chippawa, and several Rogers' Hybrids.

The implements were very few, not half as many as would take the prizes offered. Lawrence and Sons showed their combined reaper that took the first prize at London this year, also several really good ploughs. James Duff

showed Fryatt's bagholder, a very cheap and simple contrivance to enable the farmer to fill and wheel off his bags of grain without assistance.

About fifty samples of butter were shown, and we can vouch for it that the most of them were good enough to tempt an epicure, and a decided improvement on last year's show.

Last but not least comes the ladies' department, and a finer display of samples of the industry of the home circle and fireside, in the way of home-made bread, family sewing, knitting, embroidery, and even pencil or crayon drawings, than is made by the Trafalgar girls, is not often met with. Even the children had a part in the show, as eight prizes were offered for children's button charm strings, and they brought together quite a number; the first prize string had no less than 1,300 buttons on it.

It was pleasant to see the interest taken by farmers in their show, and the great number of well-dressed, and ruddy-cheeked country damsels, not only filling the hall, but also threading their way among horses, cattle and sheep, and seeming to enjoy the whole thing most mightily.

Everything passed off quietly and agreeably, and the evening wound up with a vocal and instrumental concert, at which many of the local singers acquitted themselves very well indeed.

Ottawa City Agricultural Show.

The weather was fine and the attendance large. The ground is new, this being the first fair held thereon, and is located about two and a half miles from the city. It is divided by the street into two fields, which seems objectionable, as it divides the crowd and lessens the interest. The portion or field lying north of the street was occupied by stock, and that south of the street was assigned to implements, agricultural productions, and the Floral Hall. The north field is by far the more suitable, and sufficiently large and commodious for the entire exhibition, and with a small outlay might be greatly improved and made a very pretty show ground, though the distance from the city will always be objectionable to exhibitors.

The show of stock was, on the whole, good. The collection of implements was very inferior, and many of them had been used for several years. There were only two mowers and one reaper: the mowers had seen hard service, apparently, for several years. The reaper was built in Dundas, and had taken a first prize at the Hamilton Provincial Fair last year; it had seen, to all appearance, at least one year's service. The show of carriages was fair, but not equal to the Ontario County show.

The roots and vegetables, though in small quantity, were very good, except potatoes, the samples of which were not equal to the county shows of the western part of the Pro-

vince. The display of fruit was a meagre affair; a two bushel basket would have held the whole of it. The show of grain was also small, though there were two or three bags of fine fall wheat.

In the dairy department there were several entries of butter, but only two small cheeses were exhibited. There were two or three entries of honey, and the Thomas hive was exhibited by Mr. McLatchie, and took the first prize.

One of the principal features in the Floral Hall was the display of furs, sleigh robes, ladies' furs and gentlemen's overcoats. One was inclined to think, when shown this department, that Ottawa anticipates a cold winter.

The department of fine arts was very poorly represented; the display of ladies' work not great. A piece of needle work, "David playing his harp," attracted considerable attention, and was well worthy of notice.

This was the first agricultural exhibition ever held in the city of Ottawa, and however successful as a first experiment and a local show, could not but impress an onlooker from Western Ontario with the necessity of greatly increased facilities for exhibitors and accommodation in the city and neighbourhood for visitors, before it could become a suitable theatre for the Provincial Fair. This is not said to discourage the effort, but it is only right to consider the cost and inconvenience that must unavoidably attend the holding of the exhibition at a point so extreme, and in a city so completely, as it were, in its infancy as the present capital of the Dominion.

British Agricultural Returns.

Our English exchanges report that the Board of Trade have published their returns of the agricultural statistics of the United Kingdom, from which we learn that the extent of land under wheat in Great Britain this season was 3,695,630 acres; in 1868, 3,652,115 acres; and in 1867, 3,367,776 acres, representing an acreable increase this year over last of 42,906, and an increase of 327,051 acres between 1867 and 1869. The barley crop of the present season occupied a larger breadth than during the preceding years, but a diminution from that of 1867. The returns are: Barley, in 1869, 2,256,177; in 1868, 2,131,231; and in 1867, 2,259,164 acres. The largest increase is in potatoes, there being this year 8.3 per cent. over the acreage of 1868, and 19.1 over that of 1867. The more general cultivation of the potato is doubtless due to its being one of the most profitable crops of the farm when the tubers are comparatively free from disease.

As regards live stock, it is to be regretted that there is this year a decrease in the number of cattle, and also a very remarkable decrease in the numbers of both sheep and pigs.

Best calf (under one year.) Win Wheler, Scarborough, 16
 2nd do, Jas Lawrie, Malvern, 10
Best bull of any age, Jas Patton, Scarborough, diploma
Best cow, Wm Wheler, Scarborough, 24
 2nd do, do, 16
 3rd do, Jas Lawrie, Malvern, 12
Best 3 years old cow, Wm Wheler, Scarborough, 20
 2nd do, do, 10
 3rd do, Jas Lawrie, Malvern, 10
Best 2 years old heifer, Jas Lawrie, Malvern (imported from Scotland), 10
 2nd do, Wm Wheler, Scarborough, 12
 3rd do, do, 8
Best one year old heifer, Wm Wheler, Scarborough, 12
 2nd do, do, 8
 3rd do, Jas Lawrie, Malvern, 8
Best heifer calf (under one year.) Wm Wheler, Scarborough, 10
 2nd do, Jas Lawrie, Malvern, 6
Best herd of Ayrshire cattle, consisting of one bull and five females, of any age or ages, W Wheler, Scarborough, 20

NOTE—The Judges regret that so few animals have exhibited in this useful class. What have been exhibited, especially in the female classes, were of a very superior quality.

CLASS 10—GALLOWAYS.

30 ENTRIES.

JUDGES—George Miller, Grantham; James McDonough, Götterich; George Anderson, Varna.

Best bull, 4 years old and upwards, Arthur McNeil, Vaughan, \$20
 2nd do, Wm Hood, Guelph, 16
 3rd do, Thomas McCrae, Guelph, 24
Best 2 years old bull, Thomas McCrae, Guelph, 24
Best one year old bull, Arthur McNeil, Vaughan, 20
 2nd do, do, Thos McCrae, Guelph, 12
Best bull calf (under one year), Arthur McNeil, Vaughan, 16
 2nd do, Wm Hood, Guelph, 10
 3rd do, John Nichol, London, 6
Best bull of any age, Arthur McNeil, Vaughan, Diploma
Best cow, Arthur McNeil, Vaughan, 24
 2nd do, Wm Hood, Guelph, 16
 3rd do, Wm Hood, Guelph, 12
Best 3 years old cow, Wm Hood, Guelph, 16
 2nd do, Arthur McNeil, Vaughan, 10
 3rd do, John Kerr, London, 10
Best two years old heifer, Arthur McNeil, Vaughan, 16
 2nd do, Wm Hood, Guelph, 12
 3rd do, do, 8
Best one year old heifer, Thomas McCrae, Guelph, 12
 2nd do, Arthur McNeil, Vaughan, 10
 3rd do, Wm Hood, Guelph, 6
Best heifer calf (under one year), Arthur McNeil, Vaughan, 10
 2nd do, Wm Hood, Guelph, 6
 3rd do, John Kerr, London, 4
Best herd of Galloways, consisting of one bull and five females of any age or ages, Arthur McNeil, Vaughan, 20

CLASS 11—GRADE CATTLE.

73 ENTRIES.

JUDGES—C. M. Hammond, Lobo; M. Jones, Bowmanville; Richard Tooley, London.

Best grade cow, John Miller, Brougham, \$24
 2d do, H. Young, Guelph, 16
 3d do, J. S. Thomson, Whitby, 12
Best 3 years old cow, L. E. Shipley, Falkirk, 20
 2d do, J. S. Thomson, Whitby, 14
 3d do, Sam Burgess, Woodstock, 10
Best 2 years old heifer, J. S. Thomson, Whitby, 16
 2d do, do, 12
 3d do, H. Young, Guelph, 8
Best 1 year old heifer, John Miller, Brougham, 12
 2d do, J. S. Thomson, Whitby, 8
 3d do, do, 6
Best heifer calf (under one year), Charles Baker, Hazelton, 10
 2d do, J. S. Thomson, Whitby, 6
 3d do, W. & J. Peters, London, 4

CLASS 12—FAT AND WORKING CATTLE, ANY BREED.

52 ENTRIES.

JUDGES—D. R. Ketcheson, Belleville; Robert Best, Niagara.

Best fat or or steer, J. S. Armstrong, Guelph, \$30
 2nd do, Chas Simmons, Lobo, 20
 3rd do, W Donaldson, S Zorra, 12
Best fat cow or heifer, Alex Watt, Salem, 10
 2nd do, H Young, Guelph, 20
 3rd do, J. S. Thomson, Whitby, 12
Best yoke of working oxen, Geo Nixon, London, 10
 2nd do, Alex Treadwell, Aylmer, 10
Best yoke three year old steers, Alex Treadwell, Aylmer, 10
 2nd do, Geo Nixon, London, 5

SHEEP—LONG-WOOLED.

CLASS 13—COTSWOLDS.

99 ENTRIES.

JUDGES—A. J. Jordon, Belleville; Richard Rensel-son, Galt; Thomas Russell, Charing Cross.

Best ram, two shears and over, John Miller, Brougham, (imported from England), \$60
 2d do, F. W. Stone, Guelph, 15
 3d do, John Miller, Brougham, 10
Best shearing ram, J. Miller, Brougham, (im-ported from England), 10
 2d do, J. Snell, Edmonton, 10
 3d do, F. W. Stone, Guelph, 10
Best ram lamb, F. W. Stone, Guelph, 10
 2d do, James Russell, Richmond Hill, 12
 3d do, do, do, 9
 4th do, do, do, 6
Best 2 ewes, 2 shears and over, F. W. Stone, 18
 2d do, George Mitchell, Infield, 15
 3d do, James Russell, Richmond Hill, 8
Best 2 shearing ewes, John Miller, Brougham, (imported from Engla d), 10
 2d do, F. W. Stone, Guelph, 12
 3d do, John Snell, Edmonton, 8
Best two ewe lambs, F. W. Stone, Guelph, 12
 2nd do, Jas Russell, Richmond Hill, 12
 3rd do, Jno Snell, Edmonton, 9
 4th do, F. W. Stone, Guelph, 6

CLASS 14—LEICESTERS.

996 ENTRIES.

JUDGES—Edward Jones, Thorold; J. Johnson, Ayr; J. S. Smith, Ailsa Craig; Thos Teasdale, Gahamsville; Walter Riddell, Baltimore.

Best ram, two shears and over, John Scott, Coldstream, \$20
 2nd do, Wm Jeffery, Whitby, 15
 3rd do, Jas Fisher, Hyde Park, 10
Best shearing ram, J. Snell, Edmonton, 20
 2nd do, Hugh Love, Hills Green, 15
 3rd do, J. Snell, Edmonton, 10
Best ram lamb, Chris Walker, Ilderton, 15
 2nd do, J. Scott, Coldstream, 12
 3rd do, Chris Walker, Ilderton, 9
 4th do, do, do, 6
Best two ewes, two shears and over, R White, Telfer, 18
 2nd do, J. Scott, Coldstream, 14
 3rd do, J. Scott, Coldstream, 8
Best 2 shearing ewes, Chris Walker, Ilderton, 15
 2d do, A. Oliver, Avon Bank, 13
 3rd do, B. Charlton, Telfer, 10
Best two ewe lambs, Chris Walker, Ilderton, 15
 2nd do, Jas Main, Trafalgar, 12
 3rd do, W. O. Telfer, Telfer, 9
 4th do, George Weldrick, Thoruhill, 6

SHEEP—MEDIUM-WOOLED.

CLASS 15—SOUTHDOWNS.

70 ENTRIES.

JUDGES—Irvine Diamond, Mountain View; H. D. Smith, Clearville; James Maxwell, Paris; James Hunter, Roslin.

Best ram, two shears and over, F. W. Stone, Guelph, \$15
 2nd do, do, 10
 3rd do, David Dale, London, 5
Best shearing ram, F. W. Stone, Guelph, 15
 2nd do, do, 10
 3rd do, do, 5
Best ram lamb, H. H. Spencer, Brooklin, 8
 2nd do, H. E. Irving, Newmarket, 6
 3rd do, H. H. Spencer, Brooklin, 4
Best two ewes, two shears and over, F. W. Stone, Guelph, 15
 2nd do do, 10
 3rd do do, 5
Best two shearing ewes, F. W. Stone, Guelph, 15
 2nd do do, 10
 3rd do, David Dale, London, 5
Best two ewe lambs, John Snell, Edmonton, 8
 2nd do, F. W. Stone, Guelph, 5
 3rd do do, 4

CLASS 16—SHROPSHIRE, HAMPSHIRE, AND OXFORD-SHIRE DOWNS.

18 ENTRIES.

JUDGES—Irvine Diamond, Mountain View; H. D. Smith, Clearville; James Maxwell, Paris; James Hunter, Roslin.

Best ram, two shears and over, W. Donaldson, South Zorra, \$15
 2nd do, do, George Jarvis, London, 10
Best shearing ram, H. H. Spencer, Brooklin, 10
Best ram lamb, H. H. Spencer, Brooklin, 8
 2nd do, H. H. Spencer, Brooklin, 8
 3rd do, H. H. Spencer, Brooklin, 4
Best two ewes, 2 shears and over, H. H. Spencer, Brooklin, 15
 2nd do, do, H. H. Spencer, Brooklin, 10
 3rd do, do, W. Donaldson, South Zorra, 8
Best two ewe lambs, H. H. Spencer, Brooklin, 8

SHEEP—FINE WOOLED.

CLASS 17—SPANISH, FRENCH AND SAXON MERINO.

60 ENTRIES.

JUDGES—N. H. Pauling, Louth; Richard Sholtz, McGillivray.

Best ram, two shears and over, A. Jamieson, Purpleville, \$15
 2nd do, do, J. Smith, Burford, 10
 3rd do, do, Andrew Jamieson, Purpleville, 5

Best shearing ram, Jno. Smith, Burford, 15
 2nd do, do, Jno. Smith, Burford, 10
 3rd do, do, Jno. Smith, Burford, 6
Best ram lamb, J. Smith, Burford, 8
 2nd do, W. Thompson, Raglan, 6
 3rd do, J. Smith, Burford, 4
Best two ewes, 2 shears and over, Jno. Smith, Burford, 10
 2nd do, do, J. Smith, Burford, 10
 3rd do, do, W. Thompson, Raglan, 7
Best two shearing ewes, J. Smith, Burford, 10
 2nd, A. Jamieson, Purpleville, 10
 3rd do, J. Smith, Burford, 10
Best two ewe lambs, J. Smith, Burford, 3
 2nd do, J. Smith, Burford, 6
 3rd do, R. D. Foley, Bowmanville, 7

CLASS 18—FAT SHEEP.

25 ENTRIES.

JUDGES—D. R. Ketcheson, Belleville; Robert Best, Niagara.

Best 2 fat wethers, R. Skelley, Paris, \$12
 2nd do, Wm Donaldson, South Zorra, 8
 3rd do, W. H. Telfer, Telfer, 4
Best 2 fat ewes, Lewis Tate, Guysboro, 12
 2nd do, W. F. Coker, Norwichville, 8
 3rd do, F. W. Stone, Guelph, 4

PIGS—LARGE BREEDS.

CLASS 19—YORKSHIRE AND OTHER LARGE BREEDS.

64 ENTRIES.

JUDGES—George Buttery, Strathroy; John Guth, Cobourg; James Cavan.

Best boar, one year and over, James Brodie & Son, Belleville, \$15
 2nd do, James Main, Trafalgar, 11
 3rd do, James Brodie & Son, Belleville, 9
Best boar, under one year, James Brodie & Son, Belleville, 12
 2nd do, do, do, do, 9
 3rd do, James Main, Trafalgar, 6
Best breeding sow, one year and over, James Brodie & Son, Belleville, 15
 2nd do, Angus Shaw, Kingston, 12
 3rd do, A. H. Wallbridge, Belleville, 9
Best sow, under one year old, A. H. Wallbridge, Belleville, 12
 2nd do, James Ford, Drumquin, 9
 3rd do, Wm Wood, Exeter, 6

PIGS—SMALL BREEDS.

CLASS 20—SUFFOLKS.

49 ENTRIES.

JUDGES—John Anderson, Orangeville; J. P. Wheler, Scarborough; W. Clarke, Rond Eau; Wm Gibbard, Napanee.

Best boar, one year and over, Geo Roach, Hamilton, \$15
 2nd do, James Main, Trafalgar, 12
 3rd do, Thos Cesar, Belmont, 9
Best boar, under one year, Joseph Featherstone, Credit, 10
 2nd do, Geo Roach, Hamilton, 9
 3rd do, Jas Main, Trafalgar, 6
Best breeding sow, one year and over, Jas Main, Trafalgar, 15
 2nd do, G. O. Roach, Hamilton, 12
 3rd do, do, do, do, 9
Best sow, under one year old, James Main, Trafalgar, 12
 2nd do, Jos Featherstone, 9
 3rd do, Thos Cesar, Belmont, 6

CLASS 21—IMPROVED BERKSHIRES.

91 ENTRIES.

JUDGES—John Anderson, Orangeville; J. P. Wheler, Scarborough; W. Clarke, Rond Eau; Wm Gibbard, Napanee.

Best boar, one year and over, O. P. Mabe, Tilsenburgh, \$25
 2nd do, Jos Featherstone, Credit, 12
 3rd do, Peter Hagle, Ingersoll, 9
Best boar, under one year, George Roach, Hamilton, (imported from England), 10
 2nd do, Jno Corrie, Culloden, 9
 3rd do, E. J. Yorke, Wardsville, 6
Best breeding sow, one year and over, George Roach, Hamilton, (imported from England), 20
 2nd do, Jno Grubb, Hampton, 12
 3rd do, Thos Bell, Cashmere, 9
Best sow, under one year, George Roach, Hamilton, (imported from England), 24
 2nd do, Jno Corrie, Culloden, 9
 3rd do, A. Hethrington, Denfield, 6

CLASS 22—BESSEY AND OTHER SMALL BREEDS, EXCLUSIVE OF SUFFOLKS AND BERKSHIRES.

53 ENTRIES.

JUDGES—John Anderson, Orangeville; J. P. Wheler, Scarborough; W. Clarke, Rond Eau; Wm Gibbard, Napanee.

Best boar, one year and over, Jas Ford, Drumquin, \$16
 2nd do, Geo Roach, Hamilton, 12
 3rd do, H. Husband, Zimmerman, 9

1st boar, under one year, James Ford, Drum-
 quin
 2nd do, James Mann, Trafalgar
 3rd do, George Roach, Hamilton
 Best brooding sow, one year and over, George
 Roach, Hamilton
 2nd do, Jos Featherstone, Crediton
 3rd do, Mark Ashman, London
 Best sow, under one year old, George Roach,
 Hamilton
 2nd do, do
 3rd do, do

CLASS 23 - POLITY, &
 HSE ENTRIES

JUDGES: W. J. A. Case, M. D., Hamilton
 Miller, Virgil, W. L. Lawson, London
 Best pair white dorkings, J. Bogue, London
 2nd do, A. Hebblethwaite, London
 Best pair of colored dorkings, W. & J. Peters,
 London
 2nd do, Joseph Lamb, London
 Best pair of white crested black Polands, Jos
 Lamb, London
 Best pair of golden Polands, W. & J. Peters,
 London
 2nd do, J. Bogue, London
 Best pair of silver Polands, J. Bogue, London
 2nd do, W. & J. Peters, London
 Best pair a y other variety of Polands, J. Main,
 Trafalgar
 2nd do, Jos. Lamb, London
 Best pair game fowls (black breasted and other
 breeds), James Vine, St Catharines
 2nd do, G. Z. Rykert, St. Catharines
 Best pair of game fowls, any other variety, Alex
 Boyle, London
 2nd do, J. S. Barnes, St. Thomas
 Best pair of buff Cochins Chinas, W. & J. Peter,
 London
 2nd do, Joseph Lamb, London
 Best pair white Cochins Chinas, Joseph Lamb,
 London
 2nd do, do, do
 Best pair of Brahma Footras, light, G. Z. Rykert,
 St. Catharines
 2nd do, do, do
 Best pair of Brahma Footras, dark, J. H. Thomas,
 Brooklyn
 Best pair Spanish fowls, W. H. Van Ingen, Wood-
 stock
 2nd do, G. Z. Rykert, St. Catharines
 3rd do, W. & J. Peters, London
 Best pair of golden or silver penciled Ham-
 burghs, W. & J. Peters, London
 2nd do, James Cousins, Jr, London
 Best pair of golden or silver spangled Ham-
 burghs, W. & J. Peters, London
 2nd do, J. Bogue, London
 Best pair of any other variety of Hamburgs, W.
 & J. Peters, London
 Best pair of Creve Cour, la Fleche, or Houdan
 fowls, W. H. Van Ingen, Woodstock
 2nd do, do, do
 Best pair of Sebright bantams, W. & J. Peters,
 London
 2nd do, J. Bogue, London
 Best pair of any other variety of bantams, Jas
 Cousins, London
 2nd do, W. & J. Peters, London
 Best pair turkeys (any colour), Joseph Lamb,
 London
 2nd do, J. Bogue, London
 Best pair wild turkeys, W. & J. Peters, Lon-
 don
 2nd do, James Cousins, Jr, London
 Best pair of geese (white), W. R. Havens, Homer
 2nd do, J. Bogue, London
 Best pair of geese (coloured), Joseph Lamb, Lon-
 don
 2nd do, J. S. Barnes, St. Thomas
 Best pair of Aylesbury ducks, W. & J. Peters,
 London
 2nd do, J. S. Barnes, St. Thomas
 Best pair of Eton ducks, W. & J. Peters, Lon-
 don
 2nd do, J. A. McKenzie, Crumlin
 Best pair of any other kind of ducks, W. & J.
 Peters, London
 2nd do, J. Bogue, London
 Best pair of Guinea fowls, J. Smith, Burford
 2nd do, W. & J. Peters, London
 Best pair of pea fowls, J. S. Barnes, St. Thomas
 Best pair of any other variety of fowl, not in-
 cluded in above classes, G. A. Houtledge,
 Lambeth
 2nd do, A. Hebblethwaite, London

PIGEONS

Best carrier, pouter, and tumbler pigeons, C. A.
 Stone, London
 2nd do, H. B. E. Alley, London
 Best jacobins, fantails, harbs, and trumpeters,
 C. A. Stone, London
 2nd do, H. B. E. Alley, London
 Best collection pigeons, any other varieties, W.
 J. Bailey, London
 2nd do, H. B. E. Alley, London

RABBITS

Best pair of lop-eared rabbits, Jos. Lamb, Lon-
 don
 2nd do, W. J. Bailey, London

Best pair of common rabbits, A. Hebblethwaite,
 London
 2nd do, do, do

CHICKENS AND DUCKS OF 1891

1st pair of dorkings of either variety, W. & J.
 Peters, London
 2nd do, do, do
 Best pair of game fowls of any variety, John
 Plummer, Jr, London
 2nd do, James Cousins, Jun, London
 Best pair of Spanish fowls, Jos. Lamb, London
 2nd do, W. & J. Peters, London
 Best pair of Cochins Chinas of any variety, J. Lamb,
 London
 2nd do, Jas. Cousins, Jun, London
 Best pair of Brahma Footras, Colonel H. Scott
 Toronto
 2nd do, James Cousins, Jun, London
 Best pair of Hamburgs, any variety, W. & J.
 Peters, London
 2nd do, J. Plummer, Jr, London
 Best pair of Polands, a y variety, J. Bogue,
 London
 2nd do, Joseph Lamb, London
 Best pair Aylesbury ducklings, J. Bogue, Lon-
 don
 2nd do, W. & J. Peters, London
 Best pair Rouen ducklings, J. Rowat, Niles-
 town
 2nd do, Jos. Lamb, London
 Best pair ducklings, any other kind, W. & J.
 Peters, London
 2nd do, J. A. McKenzie, Crumlin
 Best pair fowls of 1891, of any other kind, W. H.
 Van Ingen, Woodstock
 2nd do, Jos. Lamb, London

EXTRA PRIZES—Joseph Lamb, London, pair wood
 ducks, \$2; W. J. Bailey, London, pair Egyptian
 rabbits, \$1; W. & J. Peters, London, pair wild geese,
 \$2; J. F. Boyd, London, pair of lawns, \$2.

AGRICULTURAL PRODUCTIONS.

CLASS 24 - GRAINS, SMALL FIELD SEEDS, HOPS, & C

614 ENTRIES

JUDGES: John S. Nuttman, Belleville; John Mitch-
 ell, Mono; Jam s H Bessey, St. Catharines; James
 Laurio, St. Catharines; James Scarlett, Florence;
 John M. McKay, Toronto.
 The Canada Company's prize for the best 25
 bushels of Fall Wheat, the produce of the
 Province of Ontario, being the growth of
 the year 1891, James Hay, Waterdown... \$100
 2nd do, by the Association, J. T. Blagden, Car-
 lisle... 40
 3rd do, do, John Smith, Fairfield Plains... 20
 Best two bushels of white winter wheat, J. T.
 Blagden, Carlisle... 8
 2nd do, John Tennant, Paris... 6
 3rd do, Ed Blagden, Carlisle... 4
 Best two bushels of red winter wheat, John
 Richardson, North Pelham... 8
 2nd do, W. Armstrong, Lambeth... 6
 3rd do, G. W. Boggs, St. Thomas... 4
 Best two bushels of amber or midge-proof
 wheat, N. Kennedy, Birt... 8
 2nd do, M. Munro, Lambeth... 6
 3rd do, W. Armstrong, Lambeth... 4
 Extra, Thomas Seldon, Ingersoll... 4
 Best two bushels of Fife spring wheat, Alex Mc-
 Kenzie, Columbus... 8
 2nd do, S. Phipps, Pickering... 6
 3rd do, T. McEvers, Cobourg... 4
 Best two bushels Rio Grande spring wheat,
 Rich Cullis, Cobourg... 8
 2nd do, John Cullis, Cobourg... 6
 3rd do, Andrew Black, Cobourg... 4
 Best two bushels spring wheat of any other va-
 riety, T. McEvers, Cobourg... 8
 2nd do, John Cullis, Cobourg... 6
 3rd do, James Tennant, Cainsville... 4
 Best two bushels barley (2 rowed), Allan Bond,
 Inverary... 6
 2nd do, W. Thompson, Raglan... 4
 3rd do, W. Riddell, Baltimore... 2
 4th do, Thos Russell, Charing Cross... Vol Trans
 Best two bushels barley (6 rowed), W. Thompson,
 Raglan... 6
 2nd do, J. Harker, Kingston... 4
 3rd do, Allan Bond, Inverary... 2
 4th do, Thos Russell, Charing Cross... Trans
 Best two bushels of winter rye, J. E. Griffith, By-
 ron... 6
 2nd do, R. McLaren, Thamesford... 4
 3rd do, R. S. Frank, London... 2
 Best two bushels of oats (white), J. J. Fischer,
 Benmiller... 6
 2nd do, W. Thompson, Raglan... 4
 3rd do, W. Riddell, Baltimore... 2
 4th do, J. Fisher, Hyde Park... Trans
 Best two bushels oats (black), J. Rowat, Niles-
 town... 6
 2nd do, John Kennedy, Birt... 4
 3rd do, John Wilson, London... 2
 4th do, Thomas Russell, Charing Cross... Trans
 Best two bushels of small field peas, J. Rowat,
 Niles town... 6
 2nd do, J. Main, Trafalgar... 4
 3rd do, Alex McKenzie, Columbus... 2
 4th do, Andrew Black, Cobourg... Trans

Best two bushels of white marrowfat peas, Geo
 Parker, Stratroy... 6
 2nd do John Wilson, London... 4
 3rd do J. Cullis, Cobourg... 2
 4th do James Main, Trafalgar... Trans
 Best two bushels black-eyed marrowfat peas,
 Rich Foley, Bowmanville... 6
 Best two bushels of any other kind of field peas,
 Ed Jeffs Bondhead... 6
 2nd do J. T. Blagden, Carlisle... 4
 3rd do Ed Blagden, Carlisle... 2
 4th do Ed Marshall, London... Trans
 Best bushel of small white field peas, Jas Nixon,
 London... 6
 2nd do John McKillop, Wardsville... 4
 3rd do J. W. Boggs, St. Thomas... 2
 4th do Thos Russell, Charing Cross... Trans
 Best bushel of large white field beans, T. F. Purdy
 & Bros, Newburg... 6
 2nd do John Richardson, North Pelham... 4
 3rd do Thos Russell, Charing Cross... 2
 4th do W. Bissell, London... Trans
 Best two bushels Indian corn in the ear (white)
 F. Morrison, Hamilton... 6
 2nd do Chas Ross, Grovesend... 4
 3rd do G. J. Miller, Virgil... 2
 4th do Rich Ripplin, London... Trans
 Best two do (yellow), Chas Ross, Grovesend... 6
 2nd do F. Morrison, Hamilton... 4
 3rd do Geo Rowson, Courtland... 2
 4th do S. J. Brown, Niagara... Trans
 Best bushel of timothy seed, John Richardson, N
 Pelham... 6
 2nd do Allan Bond, Inverary... 4
 3rd do Thos Russell, Charing Cross... 2
 4th do J. C. Hughes, Arva... Trans
 Best bushel of clover seed, John Smith, Fairfield
 Plains... 6
 2nd do Alex McKenzie, Columbus... 4
 3rd do O. P. Mashe, Tilsonburg... 2
 4th do Thos Penhale, Jr, St. Thomas... Trans
 Best half bushel Alsike clover, H. M. Thomas,
 Brooklyn... 6
 Best bushel of flax seed, Rich Foley, Bowmanville... 6
 2nd do O. P. Mashe, Tilsonburg... 4
 3rd do Ed Blagden, Carlisle... 2
 Best Swedish turnip seed, from transplanted
 hulbs, not less than 12 lbs, John Crumb,
 Hampton... 6
 2nd do W. Murray, London... 4
 3rd do James Hay, Waterdown... 2
 Best 12 lbs of long red mangel wurzel seed,
 Allan Bond, Inverary... 6
 2nd do W. M. Bissell, London... 4
 3rd do Thos McElroon, London... 2
 Best 12 lbs of yellow globe mangel wurzel seed,
 Wm Bissell, London... 6
 2nd do W. Riddell, Baltimore... 4
 Best bale of hops, not less than 112 lbs, D. Long-
 heed, London... 20
 2nd do John Wheaton, London... 16
 3rd do A. McKenzie, Crumlin... 10
 Best bushel of sars, W. Riddell, Baltimore... 6
 Best bushel of buckwheat, John Richardson,
 North Pelham... 4
 2nd do James Nixon, London... 2
 3rd do J. S. Barnes, St. Thomas... Trans
 Best bushel of millet, John Parker, Stratroy... 4
 2nd do John Smith, Fairfield Plains... 2

CLASS 25 - ROOTS, OTHER HOND FIELD CROPS, PLAX,
 & C.

651 ENTRIES

JUDGES—James Laddlaw, Guelph; Robert Shearer,
 Niagara; H. H. Breiman, Frankville.
 Best bushel early Goodrich potatoes, F. Lewis
 Ballymote... \$3
 2nd do, John McKenzie, Lambeth... 2
 3rd do, W. Bissell, London... 1
 Best bushel garnet Chittis, Ed. Robinson, Lon-
 don... 2
 2nd do, A. Hebblethwaite, London... 2
 3rd do, Alex Russell, London... 1
 Best bushel Fuke potatoes, G. W. Boggs, St
 Thomas... 2
 2nd do, John Day, Thamesford... 1
 3rd do, Thomas McElroon, London... 1
 Best bushel red potatoes, W. Burgess, Mimco... 2
 2nd do, G. Rowson, Courtland... 2
 Best bushel peachblws, Jas. Frank, Harriets-
 ville... 3
 2nd do, John McClurg, Falkirk... 2
 3rd do, Alex. Russell, London... 1
 Best bushel Buckeyes or Carters, E. Griev, Lon-
 don... 2
 2nd do, J. Worrall, Longwood... 2
 Best bushel of any other sort potatoes, H. Tho-
 mas, Brooklyn... 2
 2nd do, J. Campbell, Stratroy... 2
 3rd do, J. Lewis, London... 1
 Best collection of field potatoes, a peck of each
 sort—named, E. Ripplin, London... 4
 2nd do, G. McKenzie, Lambeth... 3
 3rd do, W. R. Warner, London... 2

Best eight roots Marshall's Improved Swede turnips, Thos. McCrae, Guelph..... 3
 2nd do, W. Sory, Guelph..... 2
 3rd do, C. J. Fox, D. Isware..... 1
 Best eight roots Green-top Swede turnips, G. E. Ryan, Courtland..... 3
 2nd do, G. Murray, London..... 2
 3rd do, W. B. Frank, London..... 1
 Best eight roots Skirving's Swede turnips, Thos. Stock, Waterdown..... 3
 2nd do, G. Murray, London..... 2
 3rd do, H. J. Brown, Niagara..... 1
 Best eight roots White Globe turnips, G. Murray, London..... 3
 2nd do, J. Rowat, Niagara..... 2
 3rd do, Thomas Fleming, London..... 1
 Best eight Aberdeen yellow turnips, Geo. Murray, London..... 3
 2nd do, W. Walker, London..... 2
 3rd do, J. Rowat, Niagara..... 1
 Best eight cress-tops turnips, J. Pratt, Cobourg..... 3
 2nd do, J. Fisher, Hyslop Park..... 2
 1st 12 roots red carrots, W. Burgess, Mimico..... 3
 2nd do, W. Rush, Mimico..... 2
 3rd do, R. H. Ramsay, Cobourg..... 1
 1st 12 roots white or Belgian carrots, W. Burgess, Mimico..... 3
 2nd do, G. Shaver, London..... 2
 3rd do, W. Murray, London..... 1
 Best 8 roots/mangel wurzel, (long red) W. Burgess, Mimico..... 3
 2nd do, W. Rush, Mimico..... 2
 3rd do, Charles Hunt, London..... 1
 Best 8 roots red globe mangel wurzel, W. Burgess, Mimico..... 3
 2nd do, Wm. Rush, Mimico..... 2
 3rd do, J. Pratt, Cobourg..... 1
 Best 4 roots yellow globe mangel wurzel, W. Burgess, Mimico..... 3
 2nd do, John Pratt, Cobourg..... 2
 3rd do, R. H. Ramsay, Cobourg..... 1
 Best 8 roots long yellow mangel wurzel, W. Burgess, Mimico..... 3
 2nd do, Thos. Fleming, London..... 2
 3rd do, P. Murray, Westminster..... 1
 Best 8 roots of khol rabi, W. Burgess, Mimico..... 3
 2nd do, R. H. Ramsay, Cobourg..... 2
 3rd do, C. Tummonds, Sylvan..... 1
 Best 8 roots white sugar beet, G. W. Boggs, St. Thomas..... 3
 2nd do, W. Burgess, Mimico..... 2
 3rd do, Rev. J. F. Latimer, Port Stanley..... 1
 Best 12 roots parsnips, W. Burgess, Mimico..... 3
 2nd do, Wm. Rush, Kitchikoke..... 2
 3rd do, Rich. Rispln, London..... Trans
 Best 12 roots chikery, A. B. Campbell, Crumlin..... 3
 2nd do, W. Riddell, Baltimore..... 2
 3rd do, J. Crumbl, Haughton..... Trans
 Best 2 large squashes for cattle, W. Calvercross, London..... 3
 2nd do, D. Dale, London..... 2
 3rd do, John McKinnon, Lambeth..... 1
 Best 2 mammoth field pumpkins, Mrs. J. Allen, Ingersoll..... 3
 2nd do, W. Cairncross, London..... 2
 Best 4 common field do, Alex. Kerr, London..... 3
 2nd do, J. S. Barnes, St. Thomas..... 2
 3rd do, W. Bissell, London..... Trans
 Best 10 lbs of cured tobacco leaf, growth of Ontario, A. Shaw, Kingston..... 4

NOTE BY JUDGES—In presenting this report, we have much pleasure in taking notice of the excellent arrangements of the caretaker, Mr. Jones.

HORTICULTURAL PRODUCTS.

CLASS 26—FRUIT.
84 ENTRIES.

Professional Nurserymen's List.

JUDGES—John Freed, Hamilton; S. J. J. Brown, Niagara; W. Saunders, London.
 JUDGES OF WINES IN CLASSES 26 AND 27—Otto Klotz, Preston; Jacob Hespeler, Hespeler; Angus Cooke, Grantham.
 Best 80 varieties apples, correctly named, 6 of each, D. W. Beadle, St. Catharines..... \$5
 2nd do, G. Leslie & Son, Toronto..... 8
 Best 20 varieties do, correctly named, 6 of each, D. W. Beadle, St. Catharines..... 5
 2nd do, J. A. Bruce & Co., Hamilton..... 3
 Highly commended, James Dougal, Windsor
 Best 6 varieties of fall table apples, named, six of each, J. A. Bruce and Co., Hamilton..... 3
 2nd do, G. L. Slie & Son, Toronto..... 2
 Best 8 varieties of fall cooking apples, named, 6 of each, J. A. Bruce & Co., Hamilton..... 3
 2nd do, D. W. Beadle, St. Catharines..... 2
 Best 6 varieties winter table apples, named, 6 of each, D. W. Beadle, St. Catharines..... 3
 2nd do, J. A. Bruce and Co., Hamilton..... 2
 Best 6 varieties winter cooking do, named, 6 of each, J. A. Bruce and Co., Hamilton..... 2
 2nd do, R. Kettlewell, London..... 2
 Best collection, not less than 15 varieties, pears, correctly named, three of each, J. A. Bruce and Co., Hamilton..... 8
 2nd do, James Dougal, Windsor..... 6
 Best 6 varieties do, correctly named, 6 of each, D. W. Beadle, St. Catharines..... 5
 2nd do, J. A. Bruce and Co., Hamilton..... 3

Best collection, not less than six varieties, plums, correctly named, G. Leslie and Son, Toronto..... 6
 Best 5 varieties do, correctly named, 6 of each, G. Leslie and Son, Toronto..... 1
 2nd do, D. W. Beadle, St. Catharines..... 2
 Best collection peaches, correctly named, not less than six varieties, James Dougal, Windsor..... 5
 2nd do, D. W. Beadle, St. Catharines..... 1
 Best 3 varieties do, six of each, J. C. Kilborn, Beamsville..... 3
 2nd do, D. W. Beadle, St. Catharines..... 2
 R. Kettlewell, London, commended.
 Best collection grapes, grown in open air, not more than 12 varieties, two bunches each, named, D. W. Beadle, St. Catharines..... 6
 2nd do, J. C. Kilborn, Beamsville..... 3
 Best three varieties of black grapes, grown in open air, two bunches each, correctly named, D. W. Beadle, St. Catharines..... 3
 2nd do, J. Dougal, Windsor..... 2
 Best 3 varieties of grapes, any other colour, grown in open air, two bunches each, correctly named, J. Dougal, Windsor..... 3
 Best collection of grapes, not more than 12 varieties, grown under glass, one bunch of each sort, correctly named, J. A. Bruce & Co., Hamilton..... 6
 Best 3 varieties black grapes grown under glass, J. A. Bruce & Co., Hamilton..... 3
 Best 3 varieties white grapes grown under glass, J. A. Bruce & Co., Hamilton..... 3
 Best and heaviest 1 bunch black Hamburg grapes, grown under glass, J. A. Bruce & Co., Hamilton..... 3
 2nd do, G. Leslie & Son, Toronto..... 2
 Best and heaviest 1 bunch black grapes, any other kind, grown under glass, G. Leslie & Son, Toronto..... 3
 2nd do, J. A. Bruce & Co., Hamilton..... 2
 Best and heaviest 1 bunch white grapes, grown under glass, J. A. Bruce & Co., Hamilton..... 3
 2nd do, G. Leslie & Son, Toronto..... 3
 Best display of fruit, the growth of exhibitor, distinct from other entries, three specimens of each sort, named, grown under glass and in open air, James Dougal, Windsor..... 9
 2nd do, G. Leslie & Son, Toronto..... 6
 Best collection of 1 dozen each of not less than six varieties of crabs, cultivated, D. W. Beadle, St. Catharines..... 3

DOMESTIC WINES.

Professional and Commercial List.

Best half dozen dry wines, James Brown, Toronto..... \$12
 2nd do, J. C. Kilborn, Beamsville..... 8
 Best half dozen sweet wine, James Brown, Toronto..... 7
 2nd do, J. C. Kilborn, Beamsville..... 6

CLASS 27—FRUIT.

591 ENTRIES.

General List. Professional Nurserymen excluded, except in section 41
 JUDGES—Wm. Holton, Hamilton; Geo. Leslie, Jr., Toronto; Charles Arnold, Paris.
 JUDGES OF SPECIAL COLLECTION, SEC. 41—A. B. Bennett, Brantford; A. Leslie, London; R. Currie, Niagara.
 Best 20 varieties apples, correctly named, three of each, H. J. Brown, Niagara..... \$6
 2nd do, G. J. Miller, Virgil..... 4
 3rd do, R. Currie, Niagara..... 2
 Best 10 varieties do, correctly named, three of each, S. J. J. Brown, Niagara..... 4
 2nd do, G. J. Miller, Virgil..... 3
 3rd do, H. Deadman, Lambeth..... 2
 Best four varieties dessert apples, correctly named, six of each, H. J. Brown, Niagara..... 3
 2nd do, J. Freed, Hamilton..... 2
 3rd do, S. J. J. Brown, Niagara..... Vol. trans
 Best four varieties cooking apples, correctly named, six of each, J. Freed, Hamilton..... 3
 2nd do, E. A. Deadman, Lambeth..... 2
 3rd do, R. Currie, Niagara..... Vol. trans.
 Best 12 apples, fall dessert, of one variety, correctly named, G. Z. Rykert, St. Catharines..... 2
 2nd do, G. W. Boggs, St. Thomas..... 1 50
 3rd do, H. McIntyre, Lobo..... 1
 Best 12 apples, fall cooking, of one variety, correctly named, G. J. Miller, Virgil..... 2
 2nd do, Wm. Bissell, London..... 1 50
 3rd do, G. Walker, Arva..... 1
 Best 12 apples, winter dessert, of one variety, correctly named, G. Z. Rykert, St. Catharines..... 2
 2nd do, G. J. Miller, Virgil..... 1 50
 3rd do, A. G. Denman, Lambeth..... 1
 Best 12 apples, winter cooking, of one variety, correctly named, F. Morrison, Hamilton..... 2
 2nd do, A. W. Taylor, Hamilton..... 1 50
 3rd do, E. C. Fearnside, Hamilton..... 1
 Best collection, not more than six varieties, pears, correctly named, three of each, L. Spincor, Hamilton..... 5
 2nd do, Rev. R. Burnett, do..... 3
 3rd do, J. Freed, do..... 2

Best 3 varieties grapes, correctly named, three of each, G. J. Miller, Virgil..... 3
 2nd do, Rev. R. Burnett, Hamilton..... 2
 3rd do, G. Z. Rykert, St. Catharines..... 1
 Best 6 fall pears of one variety, J. Young, Hamilton..... 3
 2nd do, S. J. J. Brown, Niagara..... 2
 3rd do, L. Spincor, Hamilton..... Vol. Trans.
 Best 6 winter pears of one variety, R. Currie, Niagara..... 3
 2nd do, Rev. R. Burnett, Hamilton..... 2
 3rd do, J. Young, Hamilton..... 1
 Best collection, not less than six varieties plums, correctly named, six of each, A. M. Ross, Goderich..... 4
 2nd do, M. C. Schofield, Berlin..... 3
 3rd do, Geo. Elliott, Guelph..... 2
 Best 12 dessert plums, one variety, correctly named, M. C. Schofield, Berlin..... 2
 2nd do, Geo. Elliott, Guelph..... 1 50
 3rd do, A. W. Taylor, Hamilton..... Vol. Trans.
 Best 12 cooking plums, one variety, correctly named, M. C. Schofield, Berlin..... 2
 2nd do, John Freed, Hamilton..... 1 50
 3rd do, A. M. Ross, Goderich..... 1
 Best 6 varieties peaches correctly named, 6 of each, H. J. Brown, Niagara..... 3
 2nd do, G. J. Miller, Virgil..... 2
 3rd do, G. J. Miller, Virgil..... 1
 Best 6 peaches, white flesh, one variety, correctly named, H. J. Brown, Niagara..... 2
 2nd do, G. J. Miller, Virgil..... 1 50
 3rd do, S. J. J. Brown, Niagara..... Trans.
 Best 6 peaches, yellow flesh, one variety, correctly named, R. Currie, Niagara..... 2
 2nd do, H. J. Brown, Niagara..... 1 50
 3rd do, S. J. J. Brown, Niagara..... 1
 Best collection grapes, grown in open air, not more than 12 varieties, 2 bunches each, Jas. Taylor, St. Catharines..... 5
 Best 6 varieties grapes, grown in open air, 2 bunches of each, James Taylor, St. Catharines..... 3
 2nd do, A. M. Ross, Goderich..... 2
 3rd do, James Stanton, St. Thomas..... 1
 Best 3 bunches do, one variety, correctly named, George Durand, Niagara..... 3
 2nd do, Jas. Taylor, St. Catharines..... 3
 3rd do, Jas. Stanton, St. Thomas..... 1
 Best collection grapes, grown under glass, not more than 12 varieties, one bunch each, correctly named, Jno. Young, Hamilton..... 5
 2nd do, Hon. Z. B. Wood, Brantford..... 3
 3rd do, D. Campbell, London..... 2
 Best 2 bunches black Hamburg grapes, Hon. E. B. Wood, Brantford..... 3
 2nd do, Jno. Young, Hamilton..... 2
 3rd do, D. Campbell, London..... 1
 Best 2 bunches black grapes, any other variety, Jno. Young, Hamilton..... 3
 2nd do, Jas. Stanton, St. Thomas..... 2
 Best 2 bunches white grapes, grown under glass, correctly named, Hon. E. B. Wood, Brantford..... 3
 2nd do, Jno. Young, Hamilton..... 2
 3rd do, D. Campbell, London..... 1
 Best 6 nectarines, named, G. J. Miller, Virgil..... 3
 Best 6 quinces, R. Currie, Niagara..... 2
 2nd do, H. J. Brown, do..... 1
 Best green flesh melon, James Goodall, London..... 2
 2nd do, R. Currie, Niagara..... 1
 Best red or scarlet flesh melon, S. Poole, London..... 2
 2nd do, S. Shufeld, Hamilton..... 1
 Best water melon, R. Bugler, London..... 2
 2nd do, John Bunning, London..... 1
 Best 1 dozen new seedling winter apple, H. J. Brown, Niagara..... 3
 2nd do, S. J. J. Brown, do..... 1 50
 Best quart uncultivated native wild plum, C. Baker, London..... 2
 Best 3 clusters uncultivated native wild grape, J. Freed, Hamilton..... 2
 Greatest variety native wild crab, J. Freed, Hamilton..... 2
 Best 3 varieties cultivated crab, one dozen each, G. J. Miller, Virgil..... 2
 2d R. Currie, Niagara..... 1

DOMESTIC WINES.

General List. Professional and Commercial Wine-Makers excluded.

Best 3 bottles dry wine, James Taylor, St. Catharines..... 5
 2nd do, Wm. Bissell, London..... 4
 Best 3 bottles sweet wine, James Taylor, St. Catharines..... 1
 2nd do, Wm. Bissell, London..... 2
 Best 3 bottles sparkling wine, James Taylor, St. Catharines..... 5

SPECIAL COLLECTION OF FRUIT

Open to all—Professional and General.

The best collection, distinct from other entries, (the excellence of the collection to consist in qualities and kinds) of named varieties of apples, pears, grapes, plums, peaches, crabs, and quinces, contributed by any one person, or any number of persons, or any society (the 12th rule not to apply in this case) The Hamilton Horticultural Society, —Diploma..... \$50

EXTRAS P. L. E.—Win Irwin London 8 bottles currant wine, \$1.00 Little, Alderton, 6 bottles Myatt wine \$1; E A Deaman, Lambeth, English Riberts. \$1; W J Buttery, Strathroy, red currants, 50c; W G Benson, Toronto, raspberry vinegar, \$1; W G Denis on, Toronto, raspberry acid, \$1; T H Graydon, St Catharines, Rogers' Hybrid grape wine, \$1.

REPORT OF JUDGES ON SECTION 41—The Judges, in awarding prizes to entry No. 3, wish to note the particularly fine collection presented, especially in pears, containing about 200 varieties, almost uniformly well grown, handsome specimens, properly designated. Of peaches about 24 varieties were shown generally very fine; some of the specimens seldom surpassed. The apples were in themselves a display worthy of particular notice.

The Judges regret that competing entry No. 2 was not fully placed on the table, owing to the sudden and melancholy death of G. Z. Rykert, Esq., who had charge of the collection.

CLASS 25 GARDEN VEGETABLES 700 ENTRIES.

JUDGES—Geo Burton, Guelph; A M Ross, Goderich, J E Aylsworth, Newburg.

- Best 12 roots of salsify, E C Fearnside, Hamilton... \$2
2nd do, W Cairncross, London... 1 50
Best three heads cauliflower, A W Taylor, Hamilton... 2
2nd do, A A Baker, Guelph... 1 50
3rd do, J Worrall, Longwood... 1
Best three heads cabbage (summer), S Sinfield, Hamilton... 2
2nd do, T McBroon, London... 1 50
3rd do, G Tyas, London... 1
Best three heads cabbage (winter), D Anderson, London... 2
2nd do, R Anderson, London... 1 50
3rd do, T McBroon, London... 1
Best four sorts winter cabbages, including savoy one of each sort, D Campbell, London... 3
2nd do, W Burgess, Mimico... 2
3rd do, D Anderson, London... 1
Best three heads, red cabbage, W Packham, London... 2
2nd do, S Poope, London... 1 50
3rd do, S H Mitchell, St Marys... 1
Best 12 carrots, for table, long red, A A Baker, Guelph... 2
2nd do, A W Taylor, Hamilton... 1 50
3rd do, S Sinfield, Hamilton... 1
Best 12 intermediate or half-long carrots, A A Baker, Guelph... 2
2nd do, G James, London... 1 50
3rd do, Thos McBroon, London... 1
Best 12 early heart carrots, E C Fearnside, Hamilton... 2
2nd do, D Allan, Guelph... 1 50
3rd do, A A Baker, Guelph... 1
Best 12 table parsnips, A A Baker, Guelph... 2
2nd do, R Rispin, London... 1 50
3rd do, W Cairncross, London... 1
Best six roots of white celery, S Poope, London... 2
2nd do, J Freed, Hamilton... 1 50
3rd do, W Cairncross, London... 1
Best six roots of red celery, W Burgess, Mimico... 2
2nd do, J Freed, Hamilton... 1 50
3rd do, S Sinfield, Hamilton... 1
Best dozen capsicums (ripe), G Z Rykert, St Catharines... 2
2nd do, D Campbell, London... 1 50
3rd do, J Harker, Kingston... 1
Best collection of capsicums, J Harker, Kingston... 3
2nd do, Jas Ferris, Kingston... 2
3rd do, E C Fearnside, Hamilton... 1
Best three egg-plants, purple, S Poope, London... 2
2nd do, A W Taylor, Hamilton... 1 50
Best twelve tomatoes (red), A W Taylor, Hamilton... 2
2nd do, S J J Brown, Niagara... 1 50
3rd do, S Sinfield, Hamilton... 1
Best twelve tomatoes (yellow), E C Fearnside, Hamilton... 2
2nd do, A Pegler, London... 1 50
3rd do, M Kelly, London... 1
Best assorted collection of tomatoes, E C Fearnside, Hamilton... 3
2nd do, D Harker, Kingston... 2
3rd do, J Gampage, Hyde Park... 1
Best twelve blood beets (June), D Allan, Guelph... 2
2nd do, G J Miller, Virgil... 1 50
3rd do, J Footill, London... 1
Best peck of white onions, A W Taylor, Hamilton... 2
2nd do, R Currie, Niagara... 1 50
3rd do, W Packham, London... 1
Best peck of yellow onions, J Footill, London... 2
2nd do, R Rispin, London... 1 50
3rd do, A Weldon, London... 1
Best peck of red onions, A W Taylor, Hamilton... 2
2nd do, W Burgess, Mimico... 1 50
3rd do, R Rispin, London... 1
Best two quarts pickling onions, D Anderson, London... 1 50
2nd do, R Anderson, do... 1

- Best twelve white turnips (table), S Poope, London... 2
2nd do, R Rispin, London... 1 50
3rd do, J Worrall, Longwood... 1
Best twelve yellow turnips (table), R Rispin, London... 2
2nd do, R Currie, Niagara... 1 50
3rd do, R Anderson, London... 1
Best twelve ears sweet corn, fit for the table, S Sinfield, Hamilton... 2
2nd do, E C Fearnside, Hamilton... 1 50
3rd do, A W Taylor, Hamilton... 1
Best peck Early Rose potatoes, S Springer, Hamilton... 4
2nd do, James Hay, Waterdown... 3
3rd do, James Griffith, London... 2
Best 6 varieties of potatoes for garden cultivation, half peck of each sort, S H Mitchell, St. Marys... 2
2nd do, J Worrall, Longwood... 1 50
3rd do, R Rispin, London... 1
Best 3 summer or fall squashes, G W Foggs, St Thomas... 2
2nd do, J Barron, London... 1 50
3rd do, C Baker, London... 1
Best 3 winter table squashes, W Burgess, Mimico... 2
2nd do, W Rush, Mimico... 1 50
3rd do, R Bugler, London... 1
Best 2 vegetable marrows, H C Jackson, London... 2
2nd do, J McKenzie, Lambeth... 1 50
Best and greatest variety of vegetables, each kind named, D Anderson, London... 4
2nd do, R Rispin, London... 3

EXTRA PRIZES—R Rispin, London, peck of potato onions, 50c; do do, 3 citrons, \$1; John Worrall, Longwood, top onions, commended; John McKenzie, Lambeth, collection of cucumbers, 7 sorts, highly commended; S H Mitchell, St Marys, winter radishes, 50c; J H Jones, London, cucumbers, highly commended; S Sinfield, Hamilton, potato onions, \$1; do do, 1 cks 50c; W S Stripp, London, cucumbers, commended.

CLASS 29—PLANTS AND FLOWERS. 261 ENTRIES.

JUDGES—D Culbert, St. Catharines; Chas. Meston, Hamilton; W McKenzie Ross, Chatham.

- Best dozen dahlias, standard varieties, named, George Leslie & Son, Toronto... 2
2nd do, James Fleming, Toronto... 1 50
3rd do, John Young, Hamilton... 1
Best 12 bouquet dahlias, George Leslie & Son, Toronto... 2
2nd do, James Fleming, Toronto... 1 50
3rd do, R Kettlewell, London... 1
Best and largest collection of dahlias, George Leslie & Son, Toronto... 5
2nd do, James Fleming, Toronto... 4
3rd do, R Kettlewell, London... 3
Best two large vase bouquets, A Pegler, Junr, London... 4
2nd do Thos Partridge, London... 3
3rd do, D M Falconer, London... 2
Best pair side-table or fan bouquets, D M Falconer, London... 3
2nd do, Thos Sinclair, Ingersoll... 2
Best hand bouquet, John Barron, London... 2
2nd do, James Fleming, Toronto... 1 50
3rd do, A Pegler, Junr, London... 1
Best bouquet, everlasting, James Hay, Waterdown... 2
2nd do, Thos Partridge, London... 1 50
3rd do, John Barron, London... 1
Best collection of greenhouse plants, not less than 12 specimens, in flower, John Barron, London... 5
2nd do, James Griffith, London... 3
Best 12 pansies H. E. Buttery, London... 2
2nd do, E C Fearnside, Hamilton... 1 50
3rd do, Charles Symmonds, London... 1
Best 6 fuchsias in flower, John Barron, London... 4
2nd do, John Taylor, London... 3
3rd do, John McNeill, Guelph... 2
Best collection of annuals in bloom named, E C Fearnside, Hamilton... 2
2nd do, James Hay, Waterdown... 1 50
3rd do, James Griffin, London... 1
Best 6 cockscombs, M Kelley, London... 2
2nd do, David Allan, Guelph... 1 50
3rd do, John Barron, London... 1
Best 6 balsams, in bloom, Thos Partridge, London... 2
2nd do, R Bugler, London... 1 50
3rd do, John Symmonds, London... 1
Best 12 German asters, Thos Pallister, Guelph... 2
2nd do, R Bugler, London... 1 50
3rd do, John Symmonds, London... 1
Best collection of asters, James Hay, Waterdown... 4
2nd do, R Bugler, London... 1 50
3rd do, Thos Partridge, London... 1
Best collection of 10 weeks' stock, Thos Waterhouse, London... 2
2nd do, R Bugler, London... 1 50
3rd do, James Hay, Waterdown... 1
Best collection of hybrid perpetual roses, named, G Leslie & Son, Toronto... 5
2nd do, John Young, Hamilton... 3

- Best 3 roses of any variety, George Leslie & Son Toronto... 3
2nd do, John Symmonds, London... 2
3rd do, J Worrall, Hamilton... 2
Best floral design for supper table, Miss M Douthwaite, London... 5
2nd do, Thos Partridge, London... 4
3rd do, John Barron, London... 3
Best 12 verbenas, named, R Bugler, London... 2
2nd do, John Freed, Hamilton... 1 50
3rd do, John Barron, London... 1
Best collection of verbenas, named, John Barron, London... 3
2nd do, D M Falconer, London... 2
Best 6 petunias, single, R Kettlewell, London... 2
2nd do, Geo Tyas, London... 1 50
3rd do, Thos Pallister, Guelph... 1
Best 6 petunias, double, D M Falconer, London... 2
2nd do, George Tyas, London... 1 50
3rd do, Thos Pallister, Guelph... 1
Best collection of perennial phloxes, G Leslie & Son, Toronto... 2
2nd do, James Goodall, London... 1 50
Best 6 hardy shrubs, spikes in flower, G Leslie & Son, Toronto... 2
2nd do, George Tyas, London... 1 50
Best collection of hollyhocks, John Young, Hamilton... 2
2nd do, W Cairncross, London... 1 50
Best collection of gladioli, A. Bruce & Co., Hamilton... 3
2nd do, John Young, Hamilton... 1 50
3rd do, James Fleming, Toronto... 1
Best collection double zinnias, M Kelley, London... 2
2nd do, W Cairncross, London... 1 50
3rd do, Thos Partridge, London... 1
Best display of plants in flower, distinct from other entries, James Goodall, London... 10
2nd do, John Barron, do... 6
3rd do, A Pegler, London... 4
Best specimen of useful and ornamental rustic work for the garden, J Barron, London... 4

EXTRA PRIZES—H. E. Buttery, London, collection of panies, \$1; James Griffin, London, collection of Herbs, \$2; John Barron, London, a Breadfruit Plant \$1, and a collection of French Marigolds, \$1; D J Webb, do, Ferncase, with plants, \$2.

DAIRY PRODUCTS, &c.

CLASS 30—DAIRY PRODUCTS. HONEY, BACON, ETC. 193 ENTRIES.

Judges—John Percy, Newburgh; A McKellar, Ottawa; T McKersy, Cobourg; Thomas McInnell, Williamstown; P R Palmer, Thurlow.

- Best skin of butter, in shipping order, not less than 55 lbs, Jno. Lewis, London... \$12
2nd do, H McIntyre, Lobo... 10
3rd do, Donald Clark, Morriston... 8
4th do, J. McLurg, Falkirk... 6
5th do, H S Poudieton, Salford... 4
6th do, A. McArthur, Lobo... 2
Best butter, not less than 25 lbs, in firkins, corks or tubs, Donald Clark, Morriston... 8
2nd do, W. Murray, London... 6
3rd do, E. Atleek, Middleville... 4
4th do, W Garbutt, Oxford Centre... 3
5th do, Thos Fleming, London... 2
6th do, W. Rowe, Birt... 1
Best 3 factory cheeses not less than 50 lbs each, with statement of number of cows, and management of factory, T Lawson, Niles-town... 30
2nd do, J Collins, Mount Elgin... 25
3rd do, J. Brenton, Canboro... 20
Best cheese, dairy, not less than 30 lbs, R Manning, Kzeter... 12
2nd do, G Walker, Ingersoll... 10
3rd do, Angus Shaw, Lakeside... 8
4th do, J Frank, Harrietsville... 6
Best 2 Stilton cheeses, not less than 12 lbs each, J Fisher, Hyde Park... 8
2nd do, J Collins, Mount Elgin... 6
3rd do, H K Parsons, Guelph... 4
Best honey, in the comb, not less than 10 lbs, G Walker, Ingersoll... 4
2nd do, J H Thomas, Brooklyn... 2
3rd do, G Bennett, Cobourg... 1 50
4th do, A Hetherington, Denfield... Trans.
Best jar of clear honey, J S Armstrong, Guelph... 4
2nd do, G W Lawrence, Stratford... 2
3rd do, J H Thomas, Brooklyn... 1 50
4th do, Geo Walker, Ingersoll... Trans.
Best 30 lbs maple sugar, c-cke, Thos Pearce, Inna... 3
2nd do, T E Rowson, Courtland... 2
3rd do, H E Iwards, Lobo... 1
Best 30 lbs do salt or powdered, Platt Hinman, Grafton... 3
2nd do, J S Armstrong, Guelph... 2
3rd do, Thos Pearce, Inna... 1
Best side of cured bacon, Charles Symmonds, London... 4
2nd do, Mrs. Salzman, Byron... 3
3rd do, J Symmonds, London... 2

Best ham, cured, Mrs Bateman, Byron 3
2d do, Charles Symmonds, London..... 2
3rd do, J Symmonds, do..... 1

EXTRA ENTRIES.—Mrs David Elliot, Mount Elgin, home made bread, \$1; J H Thomas, Brooklin, bees wax, 50c; a stock of Italian bees and queens, \$1. H Kilward, Lobo, maple molasses, \$1 50; S H Mitchell, St Marys, Italian bees, \$1; W J Buttery, Stratford, maple syrup, \$2; H C Atwood, Dunclerf, Italian Queen bees, 75c; James Hughes, Hiderston, maple molasses, \$1; John Shaw, Lakeside, home made bread, 75c; Mrs A B Campbell, Crumlin, home made bread, 50c

CLASS 31—AGRICULTURAL IMPLEMENTS, WORKED BY HORSE, STEAM, OR WATER POWER.

JUDGES.—R Runciman, Goderich, Thos Stock, Waterdown; John J Grant, William Elliot, Goderich, A Oliver, Ingersoll.

271 ENTRIES
Best iron plough, Geo Gray, London, diploma and..... \$12
2d do Geo Williamson, Seaforth..... 8
3d do Geo Gray, London..... 4
Wooden plough, Jas Laurie, Sarnia, diploma and..... 12
2d do Geo Gray, London..... 8
3d do A Kirkbride, Goderich..... 5
sub-soil plough, Jno Morley, Thorold, diploma and..... 12
2d do Wm Walker, London..... 5
Double shear trench plough, Jas Laurie, Sarnia, 2d J W Massey, Bowmanville..... 10
Best double mould plough, Chas. Thain, Guelph 2nd do, George Gray, London..... 6
3rd do, Jno. Morley, Thorold..... 6
Best gang plough, H. A. Massey, Newcastle..... 12
2nd do, Stewart, Bruce & Co., London..... 8
3rd do, Geo. Gray, London..... 4
Best field or two-horse cultivator, iron, Thomas Clarke, Hampton..... 12
Best two-horse cultivator, wood, Stewart, Bruce & Co., London..... 12
2nd do, Jas. Laurie, Sarnia..... 8
3rd do, Alex. Anderson, London..... 5
Best horse hoe, or single-horse cultivator, iron, David Davis, London..... 1
2nd do, Henry Collard, Gananoque..... 2
3rd do, Geo. White, London..... 2
Best horse hoe, or single-horse cultivator, wood, J Watson, Ayr..... 3
2nd do, J Watson, Ayr..... 3
3rd do, Jas. Laurie, Sarnia..... 3
Best pair of iron harrows, H. Collard, Gananoque..... 6
3rd do, J P Stewart, Devices..... 2
Best pair of wood harrows, Isaiah Best, Mount Pleasant..... 6
2nd do, Geo. Carr, Belleville..... 2
3rd do, Peter Thompson, Ayr..... 2
Best wooden roller, H. McIntosh, Birz..... 5
2nd do, A. Keeney, Stathattan..... 5
Best grain mill, J. Watts, Ayr, diploma and..... 5
2nd do, Maxwell & Whitelaw, Paris..... 5
3rd do, L. D. Sawyer & Co., Hamilton..... 4
Commented, A J Smith, Road Fan..... 4
Best seed drill for sowing two or more drills of turnips, mangels or other seeds, J. Watson, Ayr..... 8
2nd do, W. Walker, London..... 6
3rd do, T. & W. Walker, Brampton..... 4
Best mowing machine, J. L. Green, Waterford, diploma and..... 26
2nd do, H. A. Massey, Newcastle..... 12
3rd do, L. D. Sawyer & Co., Hamilton..... 8
Best reaping machine, Tuxton, Tate & Co., Port Perry, diploma and..... 20
2nd do, Hagar, Ross, Brampton..... 12
3rd do, J. Whitlitt, London..... 8
Highly commended, but ruled out on account of polish, H. A. Massey, Newcastle..... 8
Highly commended, W. J. Hagar, St. Marys..... 8
Best combined mower and reaper, J. Lawrence, Palumbo, diploma and..... 12
2nd do, J. Koryth, Dundas..... 8
3rd do, Jas. Noxon, Ingersoll..... 8
Best horse-rake, Jas. Sontar, Chatham..... 2
2nd do, Huffman, Wright & Clow, Napanee..... 2
3rd do, Wm. Craig, Nilesstown..... 2
Best horse pitchfork and tackle, P. Grant, Clinton..... 4
2nd do, S. Raymond, Ringwood..... 2
3rd do, G. W. Abrams, Gananoque..... 2
Best horse power thresher and separator, Eastwood & Marr, Ingersoll, diploma and..... 20
2nd do, McPherson, Glasgow & Co., Fingal..... 12
3rd do, J. Watson, Ayr..... 10
Best potato digger, A. J. Lemon, Lynden..... 8
2nd do, J. Watson, Ayr..... 8
Best stump extractor, J. Douglas, Vienna..... 4
2nd do, J. Scott, Seneca..... 4
Best straw cutter, Maxwell & Whitelaw, Paris..... 4
2nd do, J. Jackson, Lucan..... 4
3rd do, J. Watson, Ayr..... 4
Best grain cracker, C. H. Waterous & Co., Brantford..... 8
Best corn and cob crusher, C. H. Waterous & Co., Brantford..... 4
Best clover cleansing machine, L. D. Sawyer & Co., Hamilton..... 12

Best cider mill and press, H Sells, Vienna..... 8
2nd do, do do do..... 4
3rd do, do do do do..... 4
Best two horse team waggon, Edgemoor & Boston, Iona..... 12
2nd do, Hummer & Pacey, London..... 8
Best horse cart, Plummer and Pacey, London..... 6
2nd do, Alex. Bruce, London..... 4
Best brook-making machine, Copp Bros, Hamilton..... 10
Best draining plough, or ditching machine, for digging drains, Gyre & Brothers, Richmond Hill..... 12
2nd do, Wm C Van Buskirk, St. Thomas..... 8

EXTRAS.—Straw-cutter elevator, Maxwell & Whitelaw, Paris, highly commended, Thistle cutter, for cultivator, F Roberts, Bradford, highly commended; Pea cleaner, J Watson, Ayr, highly commended; Pea threshing machine, D Darvill, London, highly commended, Thresher and Separator, for farmers' own use, J Sharman, Stratford, \$10; 3 horse double furrow wheel plough, George Gray, London, \$3; Combined broadcast seeder, cultivator and roller, M S Brownell, Vienna, highly commended; Set Chain Harrows, J Frazer, Tecumseh, highly commended; Self cleaning plough-coupler, A R O Page, Point Abino, \$2; Unrashed machine coupling joint, Turnbull & Co, Hamilton, \$3.

CLASS 32—AGRICULTURAL TOOLS AND IMPLEMENTS, CHIEFLY FOR HAND USE.

237 ENTRIES.
JUDGES: H Wade, Port Hope, Platt Hinman, Grafton, John Webster, Napanee; Wm. Garoult, East Oxford
Best machine for making drain tiles, D. McTavish, London, diploma and..... \$20
Best assortment of drain tiles, Close & Falconer, Woodstock..... 4
2d do J S Barnes, St. Thomas..... 4
3d do D. McIntosh, London..... 2
Best half-dozen steel hoes, Whiting & Cowan, Oshawa..... 3
2d do do do do..... 2
3d do do do do..... 1
Best half-dozen manure forks, Whiting & Cowan, Oshawa..... 4
2d do do do do..... 2
3d do do do do..... 1
Best half-dozen spading forks, Whiting & Cowan, Oshawa..... 3
2d do do do do..... 2
3d do do do do..... 1
Best seed drill, or harrow, for turnips, &c., Wm. Walker, London..... 4
2d do T. & W. Walker, Brantford..... 2
3d do do do do..... 2
Best machine for sowing grass seeds, George Murray, London..... 4
Best half-dozen scythes, Thomas Bryan, London..... 2
2d do do do do..... 2
3d do do do do..... 2
Best grain cradle, Thomas Bryan, Junr, London..... 2
2nd do, Andrew Tait, Dunart..... 1
Best half-dozen grass scythes, Whiting & Cowan, Oshawa..... 2
2nd do, do do do do..... 2
3rd do, do do do do..... 1
Best half dozen cradle scythes, Whiting & Cowan, Oshawa..... 3
2nd do, do do do do..... 2
3rd do, do do do do..... 1
Best implement or machine for cutting, pulling, or otherwise harvesting peas, hand or horse power, Huffman, Wright & Clow, Napanee..... 8
2nd do Alexander Anderson, London..... 4
Best straw cut, or barley fork, wood, Thomas Bryan, Junr, London..... 2
2nd do, John Combs & Son, Stony Creek..... 1
3rd do, do do do do..... Trans
Best fanning mill, J M Cousins, London, diploma and..... 6
2nd do, W A Gerolamy, Tara..... 6
3rd do, Stewart, Bruce & Co., London..... 4
Best straw cutter, Maxwell & Whitelaw, Paris, 2nd do, J Watson, Ayr..... 4
3rd do do do do do..... 2
Best machine for cutting roots for stock, J. Watson, Ayr..... 0
2nd do, Maxwell & Whitelaw, Paris..... 4
3rd do, S V R Hecks, Flint, Michigan..... 4
Best cheese press, W Sherwin, Alisa Craig, 2nd prize..... 2
2nd do, C Lewis, Salford..... 2
3rd do, F Bang, W. Dyson, London..... 2
2nd do, L F Warty, Norwich..... 2
3rd do, W Dyson, London..... 2
Best bee-hive, J. H. Thomas, Brooklin..... 3
2nd do S. H. Mitchell, St. Marys..... 3
3rd do B. Stone, Bond Head..... 1

Best half-dozen axe-handles, T Wright, Otterville..... 2
2nd do Brigham & Hebblethwaite, Port Stanley..... 1
Best six-chopping axes, J. Hourigan, Dundas..... 1
2nd do do do do do..... 1
Best set horse shoes, Hicks & Schmitt, Berlin..... 2
2nd do George Williamson, Seaforth..... 1
Best ox-yoke and bows, J. K. Couce, St. Thomas..... 2
2nd do G. Nixon, London..... 1
3rd do S. Washburn, St. George..... Trans
Best Farm Gate, S Washburn, St. George..... 3
2nd do W. James, Sprungford..... 2
3rd do R. Holt, Iona..... Trans
Best specimen farm fence, wood, L. Watson, Roseville..... 3
2nd do S. Washburn, St. George..... 2
Best specimen wire fencing, not less than two rods, erected on the ground, B. H. Cooper, London..... 8
Best wooden pump, Howe & Sanderson, Seaford, G. W. Williams..... 4
2nd do, G. W Cousins, London..... 3
3rd do, S Reynolds, London..... 2

EXTRAS.—Dr J McInn, Scotland, hay rack, extra prize, \$3, S Washburn, St. George, set gate langes, commended; H Sells, Vienna, washing machine, do; J McNeil, Lobo, pruning saw, extra prize, \$1; do do, apple picker, \$1; D McWilliam, Kempsville, machine for planting corn, \$2; J Kenney, London, combined bag holder and truck, commended; W James, Springfield, lever power snow gate, highly commended, do, do, combined self-closing and snow gate, commended; T Bryan, London, assortment of reaping machine rakes, commended; J S Barnes, St Thomas, socket pipe, substitute for pump loas, \$2; W Dyson, London, milk weighing can and assortment of carrying cans, \$3, C Lewis, Salford, snow gate, highly commended; J C Briggs & Son, Hamilton, milk can, strainer, and cooler, highly commended; J Dennis, Newmarket, economical frame barn, highly commended; do, do, hay and grain elevator, highly commended; J R Anger, Point Abino, hay and straw elevator, highly commended; G J Baker, Oakville, washing machine, \$2; J Harrigan, Dundas, 3 reaping and mowing sections and knives, \$2; Jas Brodie & Son, Belleville, machine for grinding cutters of mowers and reapers, com: D Darvill, London, corn-sheller, commended Thos Forfar, Waterdown, clothes wringer, \$2; Whiting & Cowan, Oshawa, half a dozen hay knives, commended; do, do, do steel rakes, commended; do, do, do potato hooks, commended; do, do, do manure drags, commended; do, do, ladles' hoes, commended; J Grenville, Thorold, barn door and gate fastener, \$4; Jas Sontar, Chatham, corn-sheller and separator, highly commended; do, mowing knife grinder, commended; do, hand corn planter, commended; R Brockton, Richmond Hill, coupling for pump rods, commended; W S Wisner, Brantford, clothes wringer, commended, A C Atwood Ducreff, model of troller, commended; A C Atwood, Dunclerf, honeycomb emptying machine, \$2; J M Cousins, London, self acting cattle pump, commended, J Kenney, London, washing machine, commended, R Appleton, Vienna pair of patent horse shoes, commended; do, do, moulding tools, highly commended; J. B. Harris, Ingersoll, milk agitator; lightly commended.

CLASS 33—PREPARED CATTLE FOOD, ARTIFICIAL MANURES, &c.

NO PRIZES OFFERED.—3 ENTRIES.
Ground bones and chemically prepared manures, Macbattie & Co, London; Cattle food, M McArthur, Coldstream.

CLASS 34—CABINET WARE AND OTHER WOOD AND HAIR MANUFACTURES.

61 ENTRIES.

JUDGES: Henry Schomberg, Toronto, Wm Bowman, London.
Bedroom Furniture, set of, 2nd prize, John Weeks, Woodstock..... \$8
Carving in wood, decorative, Andrus Brus, London..... 10
Centre Table, F. Guggisberg, Preston..... 8
2nd do, John Weeks, Woodstock..... 4
Sideboard J. J. Fair, Toronto..... 8
Coopers Work, Charles Smith, London..... 6
2d do, C. Lewis, Salford..... 4
Joiners' Work, assortment of, F. B. Schou-ld, Woodstock..... 10
Machine-wrought Moulding and flooring, 100 feet of each, F. B. Schofield, Woodstock..... 6
Turning in Wood, collection of specimens, W. S. Eber, London..... 6
Turned hollow wooden ware, assortment of, F. B. Schofield, Woodstock..... 6
Veneers from Canadian woods, undressed, Wm. Clements, Newbury..... 8
2nd do, F. F. Purdy and Bros, Newbury..... 4
Willow Ware, six specimens, John Calcutt, Lambeth..... 4

EXTRA ENTRIES.—R. S. Frank, London, white oak plank undressed, 2; black walnut, \$2; and natural crook for sleigh runners, \$1; E. Larard, Oshawa, patent spring mattress \$3; Peter Hammar, Preston, assortment of mouldings, \$4, Joshua Johnston, Lindsay, protector for windows and air tight lining for

doors and self-adjusting air-tight door thresholds, \$5; F. Guggisberg, Preston, inlaid wood-work, \$5; George Mills, agent, Toronto, spring mattress, \$2; Bowmanville Furniture Manufacturing Co., six varieties bent cane office chairs, \$4; lady's bent cane filling chairs, \$2; two bent cane children's chairs, \$2, and bent wood office chair, \$2; A. M. McKay, Woodstock, settee, \$3; Wm. Foster, Monkton, bird's eye maple bed room bureau, \$4; Wm. Peacock, Montreal, an assortment of cricket bats and wickets, \$5; do, of gymnastic rings, clubs, &c. \$2; do, of baseball clubs, \$2; Brigham & Hebbelthwaite, Port Stanley, implement and tool handles, \$5; Samuel Steinhilf, London, floor brush and mop combined, \$1; Benjamin B. Jarvis, Mitchell, quilting frame, \$4.

CLASS 35—CARRIAGES AND SLEIGHS, AND PARTS THEREOF.

114 ENTRIES.

JUDGES—W. McBride, London; John Hext, Brantford; A. L. Lord, St. Thomas.

- Axle, wrought iron, John Doty, Oakville..... \$4
- 2nd do., Henry Drescher, Montreal..... 2
- Bent shaft, half a dozen, Plummer & Pacey, London..... 3
- 2nd do., R. McKinley & Co., St. Catharines..... 3
- Bows, for carriage tops, two sets, A. Eber, London..... 2
- 2nd do., Plummer & Pacey, do..... 2
- Buggy, double-seated, covered, John Campbell, London..... 10
- Buggy, double-seated, uncovered, J. B. Armstrong & Co., Guelph..... 8
- 2nd do., John Campbell, London..... 6
- Buggy, single-seated, covered, J. B. Armstrong & Co., Guelph..... 8
- 2nd do., John Campbell, London..... 6
- COMMENDED—J. H. Moran, London.**
- Buggy, single-seated, uncovered, Smith & Jordan, London..... 7
- 2nd do., John Campbell, do..... 6
- COMMENDED—Pavey Bros., London.**
- Buggy, trotting, John McKellar, London..... 6
- 2nd do., W. J. Thompson, do..... 4
- Carriage, two horse, pleasure, John Campbell, London..... 12
- 2nd do., Pavey Bros., do..... 18
- Carriage, one horse, pleasure, J. B. Armstrong, Guelph..... 12
- 2nd do., J. D. Lawlor, Strathroy..... 8
- Carriage, child's (cab) Hill Bros., Sebringville..... 4
- 2nd do., Smith & Jordan, London..... 2
- Carriage, child's (perambulator), Abbott Bros., London..... 4
- Carriage and Buggy stuff, assortment, R. McKinley & Co., St. Catharines..... 7
- 2nd do., Plummer & Pacey, do..... 4
- Express wagon, W. J. Thompson, London..... 4
- Hubs, carriage, one dozen, R. McKinley & Co., St. Catharines..... 3
- 2nd do., John Heald, Lambeth..... 2
- Rims, or fellos, one dozen, Plummer & Pacey, London..... 8
- 2nd do., R. McKinley & Co., St. Catharines..... 2
- Pleasure sleigh, one horse, J. B. Armstrong & Co., Guelph..... 10
- Sleigh and cutter stuff, assortment, A. Eber, London..... 6
- 2nd do., Plummer & Pacey, London..... 2
- Spokes, carriage, machine made, R. McKinley & Co., St. Catharines..... 8
- 2nd do., Plummer & Pacey, London..... 2
- Springs, one set steel carriage, B. Brummitt, London..... 5
- 2nd do., Abbott Bros., London..... 5
- Sulky, trotting, John Read, St. Thomas..... 5
- 2nd do., W. J. Thompson, London..... 3
- Wheels, one pair of carriage, unpainted, W. J. Thompson, London..... 4
- 2nd do., R. McKinley & Co., St. Catharines..... 2

EXTRA ENTRIES—Geo White, London, assortment of carriage bolts and clips, \$2; Hill Bros, Sebringville, child's hand sleigh, \$2; J. H. Moran, London, fifth wheel, or pair circles for tuggies, \$2; John Heald, Lambeth turn-d wood wagon axles, \$2; Abbott Bros, London, Wagonette \$3; Abbott Bros, London, fifth wheel and irons, \$2; John Campbell, London, coach, \$10; R. McKinley & Co, St. Catharines, bob sleigh runners, \$2; W. J. Thompson, London, skeleton wagon, \$4; Wm Milner, Strathroy, patent wagon hounds and crotch's \$3; and cutter knees and beams, \$2; J. Israel Kenny, Woodstock, new style buggy, wooden springs, \$3; Wm Thomas, London, a three-wheeled velocipede, \$2; P. S. V. n. Wagner, Stony Creek, tee hook, \$1; Walter Falco, Toronto, carriage jack, \$2.

CLASS 36—CHEMICAL MANUFACTURES AND PREPARATIONS.

20 ENTRIES.

- JUDGES—Dr. Beatty, Cobourg; Dr. Bristow, Napanee.
- Colours, assortment, in oil, pulp, and powder, I. B. Goodworth, & Co, Toronto..... \$6
 - Medicinal herbs, roots, and plants, native growth, Wm. Saunders, London..... 12
 - 2nd do., Allan Bond, Inverary..... 7

EXTRA ENTRIES—Wm Saunders, London, perfumery, \$4; and samples of pharmaceutical prepara-

tions, \$8; James Williams, London, samples of chemical preparations, \$6; and samples of liquid aniline dyes \$3; L. B. Goodworth & Co; Toronto, assorted paints, Canadian dry colours, \$3; Machattie & Co., London, sulphuric acid \$3. F. A. Fitzgerald & Co., London, samples of coal oil \$4.

CLASS 37—DRAWINGS, ARCHITECTURAL AND MECHANICAL; ENGRAVINGS, BUILDING MATERIALS AND CONSTRUCTIONS. POTTERY, ETC

82 ENTRIES.

JUDGES—John Shier, Whitby; Jackson Forde, Brantford.

- Bricks, pressed, 1 doz., Close & Falconer, Woodstock..... \$2
 - Bricks, kiln burnt, 1 doz., Close & Falconer, Woodstock..... 2
 - 2nd do Neil McFee, London..... 1
 - Drawings, architectural, geometrical and perspective views, Aivas Tully, Toronto..... 6
 - 2nd do, George Durand, London..... 4
 - Decorative house painting, William Phillips, Toronto..... 6
 - Engraving on wood, with proof, P. L. Scriber, Hamilton..... 6
 - Engraving on copper, with proof, J. T. Rolph, Toronto..... 6
 - 2nd do, Copp, Clark & Co, Toronto..... 4
 - Filterer, for water, Wm Campbell, Hamilton..... 3
 - Lithographic drawing, plain, J. T. Rolph, Toronto..... 6
 - 2nd do, C. P. Clark & Co, Toronto..... 4
 - Lithographic drawing colours printed, J. T. Rolph, Toronto..... 4
 - 2nd do, Copp, Clark & Co, Toronto..... 4
 - Lithographic, commercial work, in black or colours, Copp, Clark & Co Toronto..... 6
 - 2nd do, J. T. Rolph, do..... 8
 - Mantelpiece in marble, Teale & Wilkins, London, Mathematical, philosophical, and surveyors' instruments, collection of, Charles Potter, Toronto..... 15
 - Moulding in plaster, James Smith, London..... 4
 - 2nd do, Joseph Jay, do..... 4
 - Monumental headstone Teale & Wilkins, London Pottery, an assortment, Wm Campbell, Hamilton, diploma and..... 6
 - Sewerage pipe's, stoneware, assortment of sizes, Wm Campbell, Hamilton..... 5
 - Sign writing, Charles Corin, Toronto..... 5
 - Stained glass, collection of specimens, J. McCausland Toronto..... 12
 - 2nd do, R. Lewis, London..... 8
 - Stench traps for draining, stoneware, William Campbell, Hamilton..... 3
 - Stoneware, an assortment, Welding & Belding, Brantford, diploma and..... 8
- EXTRA ENTRIES—H & A McLaren, Strathroy, artificial leg and arm, \$6; Teale & Wilkins, London, specimens of Canadian marble, \$3; Hugo Steger, London, card painting in water colours, commended; Copp, Clark & Co, Toronto, calendars and labels, highly commended; John Law London, drinking fountain, marble and bronze, \$4; J. T. Rolph, Toronto monograms, highly commended; D. H. Cruger, London, painting in new style of caustic paint, \$6; Wm Lenfesty, London, map of the United States, commended; J. T. Rolph, Toronto, specimens of business cards and fancy labels highly commended; K. Voglesang, Berlin, vegetable ivory buttons, \$4; Krogin & Co, London, England, model roof, commended; J. H. Williams, Hamilton, collection of postage stamps, commended; J. T. Rolph Toronto, specimens of seals, highly commended; J. P. Merritt, St. Catharines, chronological table, highly commended.**

CLASS 38—FINE ARTS.

174 ENTRIES.

JUDGES—R. L. Gale, Adelaide; J. D. Humphreys, Toronto.

- Professional List—Oil (Originals.)**
- Any subject, John A. Fraser, Toronto..... \$15
 - 2nd do, Wm. C. Forster, Ham'ton..... 10
 - Animals, from life, A. Vogt, Montreal..... 12
 - 2nd do, Robert Whale, Burford..... 8
 - Flowers, grouped or single, Jas. Griffith, London..... 10
 - 2nd do John H. Griffith, London..... 6
 - Historical or general figure subject, A. Vogt, Montreal..... 12
 - 2nd do, Miss Ida Brauback, Montreal..... 8
 - Landscape, Canadian subject, Robert Whale, Burford..... 12
 - 2nd do, Chas. S. Millard, Toronto..... 8
 - 3rd do, Herbert Hancock, Toronto..... 5
 - Landscape or marine painting, not Canadian subject, Robert Whale, Burford..... 10
 - 2nd do, Thomas M. Martin, Toronto..... 6
 - Marine painting, Canadian subject, John A. Fraser, Toronto..... 12
 - 2nd do, Thomas M. Martin, Toronto..... 8
 - Portrait, Thomas M. Martin, Toronto..... 10
 - 2nd do Robert Whale, Burford..... 7
 - Still life, Thomas M. Martin, Toronto..... 10
 - 2nd do, Robert Whale Burford..... 6
- Amateur List—Oil (Originals.)**
- Landscape or Marine View, Canadian subject, John C. Whale, Burford..... 8
 - Portrait John C. Whale, Burford..... 8

- Amateur List Oil. (Copies)**
- Animals, grouped or single, Miss M. E. Carty, Toronto..... 7
 - 2nd do, M. A. Galbraith, Hamilton..... 4
 - Flowers, grouped or single, M. A. Galbraith, Hamilton..... 7
 - Landscape, M. A. Galbraith, Hamilton..... 7
 - 2d do Robert Cockett, Hamilton..... 4
 - James Hamilton, London, highly commended
 - Marine view, Miss M. E. Carty, Toronto..... 7
 - Portrait, Mrs. W. D. Hammond, Wardaville..... 7
 - Still life, J. C. Whale, Burford..... 4

Professional or Amateur—Figure Subjects, (Originals.)

- Carving in wood, S. P. Leske, London..... \$12
- Model in clay or wax, with plaster cast, Teale & Wilkins, London..... 10
- 2nd do, Charles Wheelhouse, London..... 6

Photography.

- Ambrotypes, collection of, F. A. Baker, Ingersoll..... 6
- 2nd do, A. E. Willis, Woodstock..... 4
- Photograph portraits, collection of, in duplicate, one set coloured, F. A. Baker, Ingersoll..... 10
- 2d do, A. E. Willis, Woodstock..... 6
- Photograph portraits, collection of, plain, John H. Griffiths, London..... 8
- 2nd do, F. A. Baker, Ingersoll..... 6
- Photograph landscapes and views, collection of, John H. Griffiths, London..... 6
- 2nd do, George Barker, Clifton..... 6
- Photograph portrait, finished in oil, John H. Griffiths, London..... 8
- Photograph portrait, finished in Indian Ink, John H. Griffiths, London..... 8
- 2nd do, C. H. Wright & Co., Hamilton..... 4
- Photograph Portrait, finished in water colours, C. H. Wright & Co., Hamilton..... 6
- 2nd do, John H. Griffiths, London..... 4

EXTRA—M. A. Galbraith, Hamilton, bouquet of flowers, commended; James Egar, London, photograph in porcelain, highly commended; James Hamilton, London, oil painting, commended.

CLASS 39—FINE ARTS.

168 ENTRIES.

JUDGES—Alex R. Pratt, Bothwell; Henry Langley, Toronto; W. N. Crosswell, Seaford.

Professional List—(Originals)

- Water Colours.**
- Any subject, Daniel Fowler, Amherst Island..... \$10
 - 2nd do, James Griffiths, London..... 8
 - Extra, John A. Fraser, Toronto..... 6
 - Commended, C. S. Millard Toronto.
 - Flowers, grouped or single, John H. Griffiths, London..... 7
 - 2nd do Daniel Fowler, Amherst Island..... 5
 - James Griffiths, London, commended.
 - Historical or general figure subject, John A. Fraser, Toronto..... 8
 - 2nd do, C. S. Millard, Toronto..... 6
 - Landscape Canadian subject, J. H. Caddy, Hamilton..... 8
 - 2nd do Daniel Fowler, Amherst Island..... 6
 - John A. Fraser Toronto, highly commended.
 - Landscape or Marine View not Canadian subject, C. S. Millard, Toronto..... 8
 - 2nd do John A. Fraser, Toronto..... 6
 - Daniel Fowler, Amherst Island, highly commended.
 - Portrait, 2nd prize, M. Mathews, Toronto..... 5
 - Still life, Daniel Fowler, Amherst Island..... 7
 - 2nd do James Griffiths, London..... 5

Pencils, Crayons, &c.

- Crayon, plain, A. Vogt, Montreal..... 6
- 2d do, Daniel Fowler, Amherst Island..... 4
- Pen and Ink Sketch James Griffith London..... 4
- 2d do, Daniel Fowler, Amherst Island..... 6
- Sepia Drawing, James Griffiths, London..... 6

Amateur List—(Originals.)

- Water Colours.**
- Animals from life, M. A. Galbraith, Hamilton..... 5
 - Flowers, grouped or single, Robert F. Gagen, Toronto..... 6
 - 2d do, Miss M. J. Cooke, London..... 4
 - Landscape or Marine View, Canadian subject, V. Cronyn, London..... 7
 - 2d do, Charles Chapman, London..... 5

Pencils, Crayons, &c.

- Sepia, Miss M. J. Cooke, London..... 5

Amateur List (Copies) Water Colours.

- Animals, grouped or single, Margaret J. Woodhull, Komoka..... \$5
- 2d do, Charles Chapman London..... 8
- Flowers, grouped or single, Miss M. J. Cooke, London..... 5
- 2nd do Robert F. Gagen, Toronto..... 3
- Landscape, V. Cronyn, London..... 5
- 2nd do R. F. Gagen, Toronto..... 3
- Still life, Robert F. Gagen, Toronto..... 5
- 2nd do Mrs. J. A. Miller, St. Catharines..... 2

Pencils, Crayons, &c.

Table listing pencil and crayon entries with names like Mrs. J. Kerr, Miss Louisa Ewart, and Miss Risley.

EXTRA ENTRIES—Robert F. Gagen, Toronto, Still Life commended; Miss Emma Ewart, Toronto, Figure Scene, &c.

CLASS 40—GROCERIES AND PROVISIONS.

75 ENTRIES.

Table listing grocery and provision entries such as Barley, Pearl, 25 lbs; Bottled Fruits; Buckwheat Flour; and various flours.

EXTRA—Labatt & Co., London, Brown stout, commended; E. H. Shourds, Thorold, Machine for curing meats, diploma; Samuel Platt, Goderich, coarse packing salt, commended; Birely & Co., Hamilton, white wine, malt and pickling vinegar, commended; C. B. Turner & Co., Windsor, prepared pop-corn, commended.

CLASS 41.—LADIES' WORK.

212 ENTRIES.

Table listing ladies' work entries including Braiding, Embroidery, Needle work, &c. with names like Mrs. W. L. Lawrason and Mrs. Meredith.

Table listing Machine Sewing entries with names like Miss Maggie Irvine, Miss E. Glenn, and Miss Maclele.

EXTRA ENTRIES, Mrs. Meyer, London, warm water foot basket, &c.; Mrs. Geo Barker, Lobo, patch work sofa cushion, &c.

CLASS 42.—LADIES' WORK

151 ENTRIES.

Table listing ladies' work entries such as Flower, Hair, Moss, Wax and Worsted work, &c. with names like Mrs. Stephens and Miss Webb.

EXTRA ENTRIES—Miss Blow and Miss Cashan, London, millinery, bonnets and hats, &c.; Mrs. J. Park, Oxford Centre, white quilt, &c.

CLASS 43—MACHINERY, CASTINGS, AND TOOLS.

116 ENTRIES.

Table listing machinery, castings, and tools entries with names like Wm Hamilton, Jr., Toronto, and Robert Nichol.

Table listing machinery entries such as Cast wheel, sprin or level, not less than 60 lbs weight, &c. with names like Whitehaw, Beachville.

EXTRA ENTRIES—David Johns, Exeter, cave trough machine, &c.; Eyre Thuresson, Amaster, card clothing setting machine (American pattern), &c.

COMMENDED—George Campbell, Toronto, portable forge; Turnbull & Co, Hamilton, stovepipe hole regulator.

CLASS 44.—MACHINES, SEWING AND KNITTING.

27 ENTRIES.

Table listing sewing and knitting machine entries with names like Samuel Worthen, Craikook, and Mrs. L. C. Men-

CLASS 45.—METAL WORK (MISCELLANEOUS) INCLUDING STOVES.

161 ENTRIES.

JUDGES.—John Duty, Oakville; T. D. Harris, Toronto, and J. J. Whitlow, Toronto.
Engineers' brass work, an assortment, James Morrison, Toronto
Enamelled hollow-ware, assortment of, R Campbell and Co., Hamilton
Fire arms, an assortment, John Gurd and Son, London
Goldsmiths' work, Savage, Lyman & Co., Montreal
Gold and silver leaf, C. H. Hubbard, Toronto
Iron fencing and gate, ornamental, Hon E Leonard, London
Nails, 20 lbs, pressed, Pillow, Hersey & Co., Montreal
Nails, 20 lbs, cut, Pillow, Hersey & Co., Montreal
Plumbers' work, an assortment, Geo Harding, Toronto
2nd do, Edward Rogers, London
Silversmiths' work, Savage, Lyman & Co., Montreal
Tinsmiths' work, an assortment, John Boxall, Toronto

Stoves.

Cooking Stove for wood, Copp Bros., Hamilton.
2nd do, Wm. Buck, Brantford
Cooking Stove for coal, Copp Bros., Hamilton
2nd do Turbull & Co., Hamilton
Furniture for cooking stove, one set, Wm. Buck, Brantford
2nd do, J. & O. McClary, London
Hall Stove, for wood, Copp Bros., Hamilton
2nd do, Turbull & Co., Hamilton
Hall stove, for coal, Copp Bros., Hamilton
2nd do, Turbull & Co., Hamilton
Parlour Stove, for wood, J & O McClary, London
2nd do, Wm. Buck, Brantford
Parlour Stove, for coal, Copp Bros., Hamilton

EXTRA PRIZES.—David Johns, Exeter hot air drum, \$1. Pillow, Hersey & Co., Montreal, assortment of nails, brads, &c \$3; W. Dyson, London, cylinder drum for hot water, \$1; Chas. Jones, London, stove-pipe damper, 50c, Copp Bros., Hamilton, hotel cooking stove, \$6; agricultural furnace, \$3; and 12 sad irons, \$1; Jones & Co., Markham, hotel stove for wood, \$3; John Boxall, Toronto, assortment of railway lamps, \$5; water cooler, \$1; ventilators, \$1; J. & O. McClary, London, pressed copper hot-oms and stamped tinware, \$3; Geo E Baxter, London, combination stove filter, 50c, R Campbell & Co., Hamilton, enamelled stoves, and a set of enamelled plumbers' work, \$3; H. T. Smith, Toronto, three soda water apparatus, \$3; Lutz & Co., Galt, hot pressed nuts and heater and radiator drum for stoves, \$3; James Morrison, Toronto, steam gauges, \$4; Geo Harding, Toronto, hot water pipe boiler, \$2; and iron trap, for asylums, &c, \$1; C. H. Hubbard, Toronto, dentists' gold and silver foil, \$2; Peter Patterson, Toronto, patent tire coupling, \$2; John Ritchie, Toronto, Heldon's improved low water alarm, \$3; Jones & Co., Markham, 4 steel amalgam bells, \$1; John Dewe, Toronto, rivet lock for mail bags, &c, and seal for do, \$1; W F Hecher & Co., Brockville, hot air furnace for wood, \$4, do do do, for coal, \$4; D L Rey, Montreal, carriage clock, \$1; Copp Bros., Hamilton, parlor cooking stove for wood, \$2; do do do, for coal, \$2; Wallace Mitchell, Toronto, silver show case, \$4; John Boxall, Toronto, locomotive head light, \$1.

CLASS 46.—MUSICAL INSTRUMENTS.

25 ENTRIES.

JUDGES.—Robert S Ambrose, Hamilton; J D Humphreys, Toronto.
Case for or on any kind of instrument, best made and finished, J F Rainer & Co, Whitby
3rd do, McLeod, Wood & Co, Guelph
Harmonium, McLeod, Wood & Co, Guelph
2nd do, Andrus Bros, London
Melodeon, W Bell & Co, Guelph
2nd do, Andrus Bros, London
Piano, square, J F Rainer & Co, Whitby, diplomas and
Piano of any kind, (instruments awarded prizes in other sections allowed to compete), J F Rainer & Co, Whitby

CLASS 47.—NATURAL HISTORY.

10 ENTRIES.

JUDGES.—Thos Melitwrath, Hamilton; J Beatty, M D, Cobourg.
BIRDS.—Collection of native, stuffed, with common and technical names attached, and classified so as to show those injurious and those beneficial to Agriculture and Horticulture, W Mummery, London
2nd do, Wm Poole, Ingersoll
FISHES.—Collection of native, stuffed or preserved in spirits, and common and technical names attached, S Wilmot, Newcastle

INSECTS.—Collection of native, with common and technical names attached, and classified so as to show those injurious and those beneficial to Agriculture and Horticulture, W Saunders, London
2nd do, E B Reed, London

MAMMALIA AND REPTILES.—Collection of native, stuffed or preserved in spirits, with common and technical names attached, and classified so as to show those injurious and those beneficial to Agriculture and Horticulture, Wm Poole, Ingersoll
2nd do S Mummery, London

PLANTS.—Collection of native, arranged in their natural families, and named, H Choate, Ingersoll
2nd do, Thos Waterhouse, London
STUFFED BIRDS AND ANIMALS of any country, collection of, S Mummery, London
2nd do, F Tarton, Petrolia

EXTRAS E B Reed, Secretary London Branch of the Canada Entomological Society, collection of English insects, \$3, W Saunders, London, collection of Foreign insects, \$1.

CLASS 48.—PAPER, PRINTING, PENMANSHIP, BOOK BINDING AND TYPE.

30 ENTRIES.

JUDGES.—W. Buckingham, Stratford; James Gleason, London.
Bookbinding (blank book), assortment of, Robt Reid, London
R J Pearson, Toronto
Thos Dean, Toronto
Letter-press printing, plain, Robertson & Cook, Toronto
Letter-press printing, ornamental, Robertson & Cook, Toronto
Letter-press printing—Posters, plain and ornamental, Robertson & Cook, Toronto
Penmanship, business hand, Odell & Trout, Toronto
2nd do, J W Jones, London
Penmanship, ornamental (not pen and ink picture), J W Jones, London
2nd do, Odell & Trout, Toronto

EXTRA ENTRIES H C Wright, Toronto, machine made paper bags, \$2; Odell & Trout, Toronto, off-hand flourishing, \$2. Ladies of the Sacred Heart, London, moveable planisphere, \$5.

CLASS 49.—SADDLE, ENGINE HOSE, TRUNK MARTS' WORK, LEATHER, ETC.

70 ENTRIES.

JUDGES.—John Griffiths, Toronto; Hugh Cant, Galt; Duncan McKay, Brantford.
Saddlery, &c.
Collar, an assortment, A O Malley, London, 2nd prize
Harness, set of double carriage, E Kraft, Hamilton
2nd do, Martin Shipley, Brampton
Harness, set of single carriage, Martin Shipley, Brampton
2nd do, M Burgess, Woodstock
Saddle, ladies' full quilted, Thos Thompson, Toronto
Saddle, ladies' quilted safe, Thos Thompson, Toronto
Saddle, gentlemen's full quilted, Phillips & Robertson, Hamilton
2nd do, Thos Thompson, Toronto
Saddle, gentleman's plain, Shattoe, Phillips & Robertson, Hamilton
2nd do, Thos Thompson, Toronto
Trunks, an assortment, C F Ayars, London
Valises and travelling bags, C F Ayars, London

Saddle and Harness Stock

Check for horse collars, one piece, Donald Clarke, Morrison
2nd do, John Richardson, North Pelham
Belt leather, 30 lbs, James Wilson, Mitchell
2nd do, Rich Stephens, London
Brown strap and bridle, one side of each, James Wilson, Mitchell
2nd do, James Wood, St. Catharines
Deer skins, three dressed, D McLaren, London
Harness leather, two sides, R Plucombe, Strathroy
2nd do, Jas Wilson, Mitchell
Harness, carriage or gig, best assortment, J Sissons & Son, Byron
Harness, team or cart, best assortment, J Sissons & Son, Byron
Horse blankets, 2 pairs, D S McFarlane, Claremont
Kersey, for horse clothing, one piece, Donald Clarke, Morrison
2d do John Richardson, North Pelham
Skirting for saddles, two sides, James Wilson, Mitchell
2nd do, Peter King, Fergus

EXTRA ENTRIES—Jas Wilson, Mitchell, loop leather and card leather, \$2; Peter King, Fergus, collar leather, \$1; Phillips & Robertson, Hamilton, full quilted race saddle, \$3; R Stephens, London, hitching and collar leather, \$2; Lugden and Barnett, To-

ronte, steeple-chase saddle, \$3; do do do racing saddle, \$2; D McLaren, London, deerskin, Indian tanned, \$2. Ernest Kraft, Hamilton, brown leather sledge harness, diploma and \$7.

CLASS 50.—SHOE AND BOOTMAKERS' WORK.

91 ENTRIES.

JUDGES John Tyner, Toronto; John McNeil, Guelph, N S L. Day, St. Catharines.
Boots, &c.
Boots, Ladies', an assortment, McMechan & Son, London
Boys', Gentlemen's sewed, an assortment, McMechan & Son, London
Fogel boots, assortment, McMechan & Son, London
Shoemakers' Tools and Stock.

Boot and shoemakers' tools, an assortment, W. A. Young, Dundas
Bat and shoemakers' lists and trees, an assortment of, Selway & Iredale, Toronto
2nd do, W. A. Young, Dundas
Calfskins, two, John Hower, Guelph
2nd do, James Wood, St. Catharines
Calfskins, two, grafted, John Hower, Guelph
2nd do, E. W. Hyman, London
Calfskins, two, morocco, Peter King, Fergus
2nd do, John Hower, Guelph
Cordovan, two skins, Peter King, Fergus
2nd do, James Wood, St. Catharines
Dog skins, two, dressed, Peter King, Fergus
Kip-skins, two sides, John Hower, Guelph
2nd do, James Wood, St. Catharines
Kip-skins, two, grafted, John Hower, Guelph
2nd do, E. W. Hyman, London
Assortment of leather, kinds not otherwise described, Peter King, Fergus
2nd do, E. W. Hyman, London
Findings, six skins, John Hower, Guelph
2nd do, E. W. Hyman, London
Sheep skins, six coloured, E. W. Hyman, London
Solo leather, two sides, E. W. Hyman, London
2nd do, Peter King, Fergus
Upper leather, two sides, John Hower, Guelph
2nd do, James Wood, St. Catharines

COMPOSER Richard Stephens, London, James Wilson, Mitchell; & W Hyman, London; R Plucombe, Strathroy.

Upper leather, grafted, two sides, Jas. Wilson, Mitchell
2nd do, Peter King, Fergus

EXTRA ENTRIES, Thos Manning, Strathroy, boot and shoe tips, \$2; James Wood, St. Catharines, two sides oak calf, \$2; John Gurd & Son, London, pattern heel and toe plates for boots, \$3; R. Stephens, London, two sides buff leather and splits, \$2; R. Plucombe, Strathroy, assortment of boot fronts, commented; Richard Stephens, London, two sides pebble leather; \$1; Wm Williams, Paris, metallic boot heels, \$1.

CLASS 51.—WOOLLEN, FLAN AND COTTON GOODS, FURS, AND WEAVING APPAREL.

263 ENTRIES.

JUDGES—T M Aitken, Aylmer, Thos Burgess, Toronto; L R Bond, Newmarket.
Bags, one dozen, cotton, Young, Law & Co, Hamilton
Blankets, woollen, one pair, Singsoy and Hitchin, Canning
2d do Gault Bros & Co, Montreal
4 Calico, unbleached, one piece, Young Law & Co, Hamilton
5 Caps, an assortment, J Beltz, London
6 Carpet, woollen, one piece, Mrs John Sharon, Fairholville Royal
8 2d do Mrs Mary Campbell, Komoka
6 Carpet, woollen stuff, one piece, Mrs Mary Campbell, Komoka
7 Carpet rag, one piece, John Tuckey, London
5 2d do Wm Tuckey, Lohr
3 Cassimere Cloth, from Merino Wool, one piece, Cassimere Manufacturing Co. Sherbrooke
4 2d do, diploma and
7 2nd do, Barber Brothers, Streetsville
4 Cloth, Fulled, one piece, Waterhouse, Bradbury & Co, Ingersoll
7 2nd do, George Jarvis, London
5 Counterpanes, two, O. I. Mabeo Tilsonburg
3 Cordage and Twines, from Canadian Flax or Hemp, assortment of, G. Copeland, Hamilton
10 Drawers, factory-made, woollen, six pairs, Armstrong, McCrae & Co, Guelph
5 Flannel, factory-made, one piece, Waterhouse, Bradbury & Co, Ingersoll
5 2d do, Barber Bros., Streetsville
3 Flannel, not factory-made, one piece, W. Armstrong, Lambeth
5 2nd do, John Tuckey, London
3 Flannel, scarlet, one piece, Robb & Co, Strathroy
5 2nd do, Waterhouse, Bradbury & Co, Ingersoll
3 Furs, gentlemen's set of, E. Beltz, London
5 Furs, lady's set of, E. Beltz, London

Fur sleigh robes—not less than three kinds, an assortment, E. Beltz, London.....	25
2nd do, James Clench, Hamilton.....	8
Gloves and mitts of any leather, an assortment, D. McLaren, London.....	5
Oxford grey cloth, one piece, Barber Bros, Streetsville.....	6
Satinet, black, one piece, Barber Bros, Streetsville.....	5
Satinet, mixed, one piece, Barber Bros, Streetsville.....	5
Serge, white, piece of, Waterhouse, Bradbury & Co., Ingersoll.....	3
2d do, John McKillop, Wardsville.....	2
Shawl, home made, Platt Human, Grafton.....	4
2nd do, John McKillop, Wardsville.....	2
Sleepskin mats, dressed and coloured, an assortment, James Clench, Hamilton.....	6
2nd do, Robb & Co, Strathroy.....	4
Shirts, factory-made, three of each, woollen and Angora, Armstrong, McCrea & Co., Guelph.....	5
Silk and felt hats, E. Beltz, London.....	5
Stockings and socks, factory-made, woollen, three pairs of each, Armstrong, McCrea & Co., Guelph.....	4
Tweed, winter, one piece, Barber Bros, Streetsville.....	6
2nd do, Robb & Co., Strathroy.....	4
Tweed, summer, one piece, Barber Bros, Streetsville.....	6
2nd do, Robb & Co, Strathroy.....	4
Wings, checked, one piece, Waterhouse, Bradbury & Co., Ingersoll.....	5
2nd do, A. Carmichael, Nairn.....	3
Woollen cloths, tweeds, &c., an assortment, A. Paton, Manufacturing Co. Sherbrooke, Ontario.....	10
2nd do, Barber, Bros, Streetsville.....	6
Woollen Shawls, stockings, drawers, shirts and mitts, an assortment, Armstrong, McCrea & Co., Guelph.....	10
2nd do, Donald Clark, Morrison.....	6
Yarn, white and dyed, 1 lb. of each, Armstrong, McCrea & Co., Guelph.....	3
2nd do, Robb & Co., Strathroy.....	3
Yarn, fleecy woollen, for knitting, one lb., Armstrong, McCrea & Co., Guelph.....	3
2nd do, John Richardson, North Pelham.....	2
Yarn, cotton, two pounds, Young, Law & Co., Hamilton.....	3
2nd do J. W. Whitehead Peterboro'.....	2

EXTRA ESTRIES.—John Johnston, London, Imitation Brussels Carpet, \$3; John McKillop, Wardsville, Shepherd's Plaid, \$1; Armstrong, McCrea & Co. Lady's Underclothing, \$4; Geo. Copeland, Hamilton, Manilla Twine and Cordage, \$5; A. C. Atwood, Duncraig, Lambkin Overcoat, \$3; Donald Donogh, London, Fancy Table Cover, \$3; Waterhouse, Bradbury & Co., Ingersoll, Flannel navy blue, \$2, and three pieces of shirting, \$3; G. H. Patrick, Bix, Shepherd's plaid, \$2.

Miscellaneous.

Sharpening Edged Tools.

The *Mark Lane Express* copies the following recipe for sharpening edged tools from a German scientific journal, for the benefit of farmers, mechanics, and laborers:

"It has long been known that the simplest method of sharpening a razor is to put it for half an hour in water to which has been added one twentieth of its weight of muriatic or sulphuric acid, then lightly wipe it off, and after a few hours set it on a hone. The acid here supplies the place of a whetstone by corroding the whole surface evenly, so that nothing further than a smooth polish is necessary. The process never injures good blades, while badly hardened ones are generally improved by it, although the cause of improvement remains unexplained.

"At length this process has been applied to many other cutting implements. The workman, at the beginning of his noon spell, or when he leaves it in the evening, moistens the blades of his tools with water acidulated as above, the cost of which is almost nothing. This saves the consumption of time and labor in whetting."

Greasing Wagons.

This is of more importance than wagon owners imagine. The following, from an unknown source, says the Coachmaker's Magazine, is valuable information on the subject, which we trust will be duly heeded:

Few people are aware that they do wagons and carriages more injury by greasing too plentifully than in any other way. A well made wheel will endure constant wear from ten to twenty-five years, if care is taken to use the right kind and proper amount of grease; but if this matter is not attended to, they will be used up in five or six years. Lard should never be used on a wagon, for it will penetrate the hub, and work its way out around the tenons of the spokes, and spoil the wheel. Tallow is the best lubricator for wooden axle-trees, and castor oil for iron. Just grease enough should be applied to the spindle of a wagon to give it a light coating; this is better than more, for the surplus put on will work out at the ends, and be forced by the shoulder bands and nut-washer into the hub around the outside of the boxes. To oil an iron axle-tree, first wipe the spindle clean with a cloth wet with spirits of turpentine, and then apply a few drops of castor oil near the shoulder and end. One teaspoonful is sufficient for the whole.

We would add that for journals on which there is a heavy pressure it is a good plan to mix with the oil some lampblack or common soot. Powdered plumbago or black lead is also employed for the same purpose.—*Ex.*

HOW TO MAKE A COLD CHISEL.—Farmers and gardeners frequently need a good cold-chisel for light work, such as cutting off rivets, nails, or pieces of hoop-iron. A piece of bar-steel, and the forging it into proper shape, will cost from fifty cents to one dollar. Those persons who want the use of a cold-chisel only once a week or so, do not always have the money to spare for a tool that they have but little use for. Therefore, to get a cheap chisel, that will subserve all the purposes required, make use of a large, flat file that has been worn out. Break off one end, so that a piece will be left about eight inches long; heat it in a charcoal-fire to near redness, and let it cool gradually. Then the steel will be soft. Now grind one end square and true for the head end, and form the cutting edge by grinding at the other end. Thrust the cutting end in a charcoal fire, in the cook-stove, until one inch in length is red hot. Now cool half an inch of the edge in cold water, which will render the edge quite too hard. Watch the color of the steel as the different shades appear near and at the cutting edge, and as soon as you see a light straw-color on the surface, plunge the chisel into cold water. By this means, you will get a cold-chisel sufficiently hard on the edge to cut iron, and so soft and tough in the part above the edge that it will bend rather than break.—*Heath and Home.*

SULPHUR DISSOLVING.—1 lb. flowers of sulphur, and 1 lb. fresh slaked lime. Place in an iron or glazed earthenware pot containing five pints of water, boil ten minutes, keeping stirred all the time. Allow the whole to settle, and about four pints of the liquid will be available for bottling. One pint of the bottled liquid to twelve gallons of water should be applied with a syringe to plants or fruit trees infested with mildew, making every part thoroughly wet. It may be applied without injury to the foliage and fruit of Vines. A more useful insecticide, but not to be applied to Vines, Melons, nor Cucumbers when in leaf, being one of the best for washing trees in winter as a preventive, and for destroying insects at any time, is as follows:—7 lbs. of sulphur vivum and 7 lbs. of quicklime; boil together for fifteen minutes in three gallons of water, then add two pounds of soft soap and one pound of tobacco, and boil slowly for thirty minutes. Strain and bottle the clear liquid. Apply the liquid with a brush, and undiluted, as a winter dressing to trees at rest. Use one pint to three gallons of wash for fruit trees in leaf, except those previously mentioned, and all plants with soft hairy leaves, whilst those with smooth leaves, as the Peach, Gardenia, &c., it will not injure. It is an effective remedy for red spider, thrips, aphids, and mildew. We have used it upwards of twenty years, and it was employed for more than half a century by the gardener who gave us the receipt.

Advertisements.

YOUNG AND MIDDLE AGED MEN started in Business.—I can do more towards assisting those out of employment to Successful Business than any other man in the nation. For proof of this, and valuable information, address
 vi-11-1t. H. G. EASTMAN, L.L.D., Poughkeepsie, N.Y.

PARENTS AND GUARDIANS.—I can do more for your YOUNG MEN and BOYS preparing for Active, Successful Life, than any other man in the nation. For proof of this and other valuable information, address
 vi-11-1t. H. G. EASTMAN, L.L.D., Poughkeepsie, N.Y.

VINEGAR, HOW MADE FROM CIDER, WINE, Molasses or Sorghum in 10 hours, without using drugs. For circulars, address F. I. SAGE, Vinegar Maker, Cromwell, Conn., U.S. 1-9-3t. *

FARMERS SHOULD USE MILLER'S TICK DESTROYER FOR SHEEP.



IT DESTROYS the Ticks, promotes the growth of the wool, and improves the condition of the animal. Every day brings additional testimony of its thorough effectiveness. No flockmaster should be without it.

Sold everywhere in boxes at 35c., 70c., and \$1. A 35c. box will clean 20 Sheep or 35 Lambs.

HUGH MILLER & CO., Chemists, Toronto.

NO. 1 PRIZE SAWING MACHINES.

WE ARE NOW MANUFACTURING OUR No. 1 Improved four or six-horse Machine, and the celebrated Tottum two-horse Machine, from new and improved patterns, and can recommend them as superior to any other machine manufactured in Canada.

The Tottum Sawing Machine requires but two horses to run it, weighs about 300 lbs. complete, and is capable of cutting a cord of wood in less than seven minutes. Every farmer should have one, as they can be used not only in cutting wood but to run any other light machinery that may be required on the farm.

This Machine competed at the Provincial Exhibition in 1869, with large machines requiring four and six horses to run them, and was awarded the prize over all competitors.

All orders addressed to us will receive prompt attention.

NOXON BROS., Ingersoll, Ont

v1-11-11.

WINDSOR NURSERIES JAMES DOUGALL, Proprietor, WINDSOR, ONT.,

HAS FOR SALE, for Fall Planting, a general assortment of Nursery Stock, comprising—Fruit and Ornamental Trees, Shrubs, Vines and Strawberries.

Also, a fine assortment of TULIPS and HYACINTHS. Attention is called to the following, of which the stock is very fine—

DWARF PLUMS—From one to six years old. A large portion of them is bearing. The stock of two year-old is the best he has ever grown, and comprises all the leading varieties.

DWARF APPLES—Three to six years old, principally bearing, very fine, and will bear transplanting very well.

GRAPE VINES—From one to three years old, of all the best hardy varieties. Will be sold one-third lower than in Spring, and very low by the quantity.

CATALOGUES SENT FREE TO ALL APPLICANTS. The Canadian Fruit Cult. published by J. H. Thomas, five cents.

Orders should be sent early and will be promptly attended to. TERMS CASH.

JAMES DOUGALL, Windsor.

v1-11-11.

GREAT SALE OF ITALIAN, HYBRID AND NATIVE BEES AND BEE HIVES.

THE Subscriber wishing to make different arrangements in his Apiary, will offer for sale at Public Auction, on November 23rd, 1869, at the Village of Brooklyn, Ont.,

25 Stocks of Italian Bees,

20 Stocks of Hybrid Bees, and

15 Stocks of Native Bees;

Also, a number of Bee Hives, both double and single boarded

TERMS.—All sums of \$5 and under, cash; for over that amount, credit will be given until the 1st of July, 1870, by furnishing approved notes. Interest will be charged from the day of sale, if not paid when due. Parties who cannot attend and desire to purchase, can do so through the subscriber, 50 cents extra will be charged on each stock for shipping. Sale to commence at 12 o'clock, sharp

Brooklyn, Ont. V11111 J H THOMAS

DAIRYMAN'S GOODS.

VATS, HEATERS, PRESS SCREWS, HOOPS, (RED CHERRY), CANS, &c., &c.,

OF the latest improved styles, and of the best quality, sold cheaper than any house in the trade.

SMALL VATS, complete, suitable for thirty cows and under, sent to any address in Canada, free from rail expenses, for thirty dollars. Send for price list, and address H. PEHLAR, Box 100, Oshawa.

v1-2-11

Markets.

Toronto Markets.

"CANADA FARMER" Office, Nov. 8th, 1869.

FLOUR AND MEAL.

The market has been quiet, with very little doing. We quote wholesale prices.—

Flour, No. 1 Super, \$4 25 to \$4 30, Extra, \$4 65. Oat Meal, \$4 25 to \$4 30, Corn Meal, \$4 to \$4 25. Bran, per ton, \$12.

GRAIN.

The market has been unusually dull. The tendency of prices seem to be downwards, but there has been so little doing that it is almost impossible to give quotations.

Barley.—There have been many lots offering, but the market has been so dull, and advices from Oswego so unsatisfactory, that it has been almost impossible to find buyers. The receipts on the street market continue liberal, and command a ready sale at current prices.

We quote wholesale prices:—Wheat, Spring, 85c. to 90c.; Fall, 95c. Oats, 34c. Barley, 60c. to 67c. Peas, 65c. Rye, 50c. to 55c.

HAY AND STRAW.

Hay is scarce and in good demand. From \$9 to \$14 is paid, the average being from \$12 50 to \$13. Straw is also scarce, and is firm at \$7 to \$9.

PROVISIONS.

Dressed Hogs.—Market firm and seemingly advancing. Buyers are paying from \$7 50 to \$9. We quote:—

Pork, Mess, \$25 to \$25 50, Extra Prime, \$22 to \$23. Bacon, Cumberland, 15c. to 13½c. Lard, new, 16c.

Butter, choice dairy, 20c. to 21c., ordinary ship's lots 19c. to 20c.; inferior store-packed, 17c. to 18c. Eggs—packed, 16c. to 19c.

Cheese—12½c. to 13c. Potatoes—in good demand. Prices, from 35c to 40c.

Apples—Selling at from \$1 to \$2 50 per bbl. Salt—Goderich has advanced, and now sells at \$1 60.

Liverpool is nominally worth \$1.40, and American coarse 85c. to 90c.

PROVINCIAL MARKETS.

Galt, Nov. 2.—Fall Wheat, white, 95c. to \$1.; Treadwell do. 85c. to 94c. spring do. 95c. to 98c. Barley, 55c. to 58c. Oats, 27c. to 30c. Peas, 55c. to 62½c. Potatoes, per bush, 25c. to 30c. Apples, 2½ to 6½c.

Goderich, Nov. 2.—Fall Wheat, 80c. Spring Wheat, 80c. to 85c. Flour, \$4 50. Oats, 25c. Peas, 50c. Barley, 47c. to 50c. Potatoes, 40c. to 50c. Butter, 17½c. Eggs, 15c. Hay, per ton, \$8 to \$10. Hides (green), \$5 50. Wood, \$2 50. Beef, per cwt., \$9. Chickens, per pair, 20c.

Seaforth, Nov. 2.—Midge Proof, 75c. to 80c. Fall Wheat, new, 60c. to 85c. Spring Wheat, 90c. to 92c. Flour, per bbl., \$4 50 to \$4 75. Oats, 25c. to 30c. Barley, 45c. to 55c. Potatoes, 50c. to 55c. Peas, 55c. to 57c.; Butter, 19c. to 20c.; Eggs, 15c.

Barrie, Nov. 2.—Fall Wheat, 80c. to 90c. Spring Wheat, 75c. to 90c. Barley, 60c. to 70c. Peas, 40c. to 50c. Oats, 25c. to 30c. Potatoes, 25c. to 30c. Pork per 100 lbs., \$5 50 to \$6. Beef per 100 lbs., \$4 50 to \$5. Butter per lb., 18c. to 20c. Eggs per dozen, 10c. to 12c. Hides per 100 lbs., \$3 to \$5 50. Hay per ton, \$7 to \$8. Calfskins, per lb., 8c. Flour, \$4 50 to \$5.

Guelph, Nov. 2.—Fall Wheat, per bush, 93c. to 95c. Spring Wheat per bush, 90c. to 93c. Oats, per bush, 25c. to 28c. Barley per bush, 55c. to 60c. Peas, per bush, 60c. to 63c. Hay, per ton, \$10 to \$12. Straw, per load, \$3 to \$4. Eggs, per dozen, 15c. to 16c. Butter, dairy, 20c. to 22c., store-packed, 19c. to 20c. Butter, in rolls, 21c. to 22c. Apples, per bag, \$1. Dressed Hogs, \$8 to \$8 50. Potatoes, per bag, 30c. to 40c. Lambkins, each, 50c. to 70c. Pigs, 15c. to 25c. Hides, per cwt., \$4 50 to \$5. Beef, per cwt., \$5 to \$6. Pork, per lb., live weight, 3c. to 4c. Mutton, per lb., 5c. to 7c. Ham, per lb., 10c. to 12c. Pork, \$7 to \$9. Lamb, \$1 50 to \$2. Shingles, per quar., \$1 50 to \$1 70. Wood, per cord, \$4 to \$4 50. Wool, per lb., 31c.

Montreal Markets, Nov. 3.—Flour—Superior Extra, \$4 90 to \$5. Extra, \$4 to \$5 10, Fancy, \$4 75 to \$4 85, Welland Canal Superior, \$4 60 to \$4 65, Superior No 1 Canada wheat, \$4 61 to \$4 70; No. 1 Western, \$4 60 to \$4 65, No. 2 Western, \$4 25 to \$4 30. Bag Flour, 160 lbs, \$2 25 to \$2 35. Wheat, Canada Fall, \$1; Spring, \$1 02½. Western, 98c. Oats, per 32 lbs., 31c. to 32c. Peas, \$2½c. to 84c. Barley, per 48 lbs., 55c. to 65c. Butter, dairy, 20c. to 21c., store-packed, 19c. to 20c. Ashes, Tols, \$5 40 to \$5 45; pearls, \$5 60 to \$5 65.

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