





The field.

### Manufacture and Application of Manure.

MANY of the readers of THE CANADA FARMER, as well as all agriculturists worthy of the name, will have made every possible enquiry on the subject of artificial manures in the hope of finding something that may be less troublesome and more efficacious than the produce of their own cattle-sheds and barn-yards. The serious expense and the trouble of manuring with stable and farm-yard manure often tends to prevent its use, notwithstanding that the farmer may be fully aware of its importance. The carrying out of farm-yard manure seems in our climate always to come at the wrong time. In the winter it is impossible to get at it for the snow and the frost. In the spring we are fully engaged with our preparation of the land for spring crops, and in the seeding of them. Midsummer finds us overwhelmed with haying and harvest; and the autumn with autumnal ploughings and preparations for the winter; so that the only time which can be certainly set apart for emptying the barn-yard, and other depositories of manure, is the short period after spring seeding, and before haying; and even that portion of time with our short-handed farmer is required for various other purposes.

These difficulties naturally divert attention to artificial manures. Could barn-yard manure be got on the land as easily as plaster, the trouble would cease, and every man would bring all he could raise into use; but unfortunately this cannot be done, and the consequence is, that the manure is left in the yard, or is not collected and applied;—the result is, half crops and the cry that farming does not pay.

Now manuring is the soul of farming, and the cheapest, best and most effectual manure is that from the stable, byres and farm-yard. Bones, guano, superphosphates, plaster, lime and salts, of various kinds, all possess separate and great virtues, but barn-yard manure possesses all their virtues combined, and many others which they do not possess, and unless large quantities of it are made, collected, and put on the land, the farm must and will deteriorate. The farmer's thought by day and dream by night ought to be "manure, and how to get it on the land." With the small stocks of animals raised on most Canadian farms, no farmer has enough of it, and if he neglects what little he has, his crops will be light and he will be, and continue to be, poor. There are not through-

out Canada twenty farms where even what manure there is, is all saved,—the liquids are allowed to escape, and the solids are leached by the rain, and evaporated by the sun, until what is left and used is as poor and fusionless as possible. Can this not be amended? Will not people see their own interests? We fear not while the collecting, obtaining and carrying out the manure is essentially such a nasty job. The farmer himself does not like it. The sons won't do it if they can help it. The hired man dirties the house and his clothes, which are often to be washed in the house, and make it redolent of anything but pleasant perfume. In cold weather due care of health will not admit of standing in the wet, and Canadian leather will not keep it out. In warm weather it is still more disagreeable, and according to modern sanitary ideas, possibly unhealthy. To make the job a palatable one, all this must be altered; the aid of machinery must be called in, both to load and unload; proper tanks must be built to save the liquid manure, and to take advantage of all its virtues, and the solids and fluids must be mixed together.

Mech has met these difficulties by reducing all to a watery state, and carrying it to the land through iron pipes. This is hopeless in Canada, but can we not concentrate it, and yet leave it sufficiently fluid to move by mechanical means? If the straw, hay, and all other fibrous food, before being either fed or bedded to the cattle, were cut into chaff, not only would it reduce sooner, but it would be easy to pump or remove from tanks by elevators of different construction moved by animal or steam power. Cannot our carts be made water-tight, and then discharge their contents on the soil without other aid than the moving of the horses over the ground? If tanks were formed, and all the results of the stable, byres, pig-styes, &c., carefully conducted to them, the contents could be moved as well in the winter as the summer. The tanks being underground and covered, the contents would never freeze, and might well be scattered over the snow from such vehicles as ingenuity could construct; and although doubtless some of the valuable portions would exhale into the air, yet we may be sure that such manuring would be a vast deal better than none. Besides, if the ammonia were fixed by plaster, sulphuric acid, or other chemical means, it is now an established fact, that all losses by exhalation might be done away with. Even should this be objected to (though we own we cannot see the objections), a very small expense would construct manure pits in the fields sufficient to enable the contents of the tanks to be transferred during the winter when otherwise the teams and men would be comparatively idle.

One great advantage of such a system would be the possibility of manuring growing crops of wheat, rye, and other winter crops, and also the meadows and pastures. No one can doubt that a field of winter wheat would be the better of such a dressing, or that the yield of our meadows would be doubled by adopting the course hinted at.

We throw out these hints for adoption to provoke reflection and experiment on the part of those who feel the necessity for a change in the present system. Now everything is hurry-scurry in the growing season, and too often idleness and sloth in the winter season. Cattle are left to shiver and starve round straw and hay-stacks, and to help themselves to their food, when by being stabled not only would their manure pay for their keep, but the cattle instead of becoming stunted and cramped with the cold, would be growing and improving, and the profits of manuring would be saved instead of being wasted. Straw littered to animals during the winter will not rot till the following summer. If the straw were all first chaffed, or cut up small (as it might be by the use of a horse-power cutting box), and found its way with the liquids of the stable to the tanks, it might be moved within a month, and be fertilizing the crops instead of becoming a nuisance round the home premises.

This matter is too important to be dismissed here; we shall resume it from time to time, and discuss it in its various bearings as space and the pressure of other topics will admit.

### More about Manure.

In a recent issue the importance of pulverizing manure before applying it to the soil, was urged in a short article entitled, "Fining Manure." The *Country Gentleman*, not long since, had a capital editorial on the same subject, in which the common practice of spreading manure in lumps, or in unbroken masses of fibrous material, and ploughing it into the soil, in this state, is strongly reprobated. Our contemporary justly observes: "It requires but a moment's reflection to perceive that such a coarse conglomerate of large lumps of manure and large clods of earth, must be quite unfit for the fine, delicate, thread-like fibres constituting the rootlets of plants, to extend through in search of nourishment." Composting, mixing, thoroughly rotting, &c., are urged, and an excellent suggestion in reference to the use of straw for litter is given, viz.: that it be passed through a straw cutter before it is scattered as bedding. With a good cutting-box, such as every farmer should have, this is less trouble than might at first be supposed, and will be amply repaid in the improved quality and speedier preparation of the manure.

Many farmers are so alive to the importance of a supply of manure, that they contract with hotel keepers in adjacent towns and villages to bring in their straw, and receive in return the manure made on the premises. So far well. But it is a common practice to team the manure thus obtained direct to the land, a course open to many objections, not the least of which is, that the seeds of all manner of weeds are thus conveyed to the farm, in a state which renders it almost certain that they will germinate at once, and stock the soil with vegetable pests. We know a market gardener who pursued this policy

until his land, though rich and fertile, became so full of weeds as to baffle every effort to keep them down. All manure should thoroughly ferment and rot before being put on the land, in order, among other objects, that all noxious seeds may have their vitality destroyed.

Many intelligent and experienced farmers are adopting the plan of spreading their manure in the way of a top-dressing to land which has either been fall ploughed, or is intended to be broken up in the spring. There is doubtless some loss of the volatile portions of the manure in connexion with this course, but it is probably less than is generally supposed, while it is an immense advantage to have the soluble parts dissolved by the rains, and distributed as only rain can distribute them, among the particles of the soil, by which they are absorbed and held in store as nourishment for growing crops. A thin coating of manure spread on winter wheat in the fall, has been found of advantage in partially protecting the surface when the ground is bare in winter, and also in greatly increasing the yield.

## Farming and Rural Life in Canada, &c.

To the Editor of THE CANADA FARMER:

Sir, - The letter in your last, written in reply to an English Grazing Farmer, by a letter from Gloucestershire, appears to require some explanation.

Of middle class emigrants, England probably furnishes the greatest proportion; of these, one portion is composed of men of mature age, who in the words of the *Times* have been "hit very hard at home," and seek to better their condition, or rather to maintain a position in a new country, which, they find from impaired means, they cannot keep in an old country. The other portion consists of young men, who prefer emigrating, because they find something attractive in a colony in the way of freedom, which they fancy is not appurtenant to English life, and they persuade themselves that the chances are better in a new colony, than in England, where it is hard to get on. With both of these colonists or intending colonists, I have had a deal of correspondence and intercourse subsequent to arrival in Canada.

I have now an acquaintance who from an adverse Chancery suit, has brought out himself, wife, and two children, with perhaps from £500 to £700 stg. He intends to purchase 100 acres of clear land in a district where the ordinary social advantages of church, post office, and market, are within easy reach—and "to be thoroughly independent," by which, I infer, that the family are to get along without help indoors, and as little as possible out of doors.

The farm is to cost about \$2000, of which about half is to remain payable in annual instalments for five years; and the stock and furniture is to cost about \$1000 cash.

As to no neighbours of the same degree as himself, as your correspondent infers, there are at least three within three or four miles of his house, who are equal to any to be found in an ordinary English parish—fit associates for the clergyman, the medical man, and the lawyer, and if in England, they would be on friendly footing with the squire and his family, although not on terms of intimacy. To say that Canada has no good neighbours to offer new settlers, because the various grades in English society are not to be met with, is unjust, for experience convinces me that there is as much genuine society here as elsewhere, if less of polish there is also less of vulgarity, or of what Thackeray defines "as snobbery."

As to there being "no pleasure," surely there is daily pleasure in the occupation of a farmer, to say nothing of the winter evenings, when so many pleasant "re-unions" take place, preceded and completed by the merry sleigh drives, which of themselves cheer up the most dismal amongst us.

As to Fox hunting, there is certainly none, and yet I have seen more than one scratch pack after a bagged fox on the ice, but I cannot say the sport was very good. I have, however, two English friends now with me who flushed about 18 woodcocks in two hours, and brought down about 10—and were surprised at the number of partridges or tree grouse, to say nothing of the wood ducks and teal, or of the black bass and shad fish which vary occasionally our bill of fare.

For all these things the settler has no time or inclination, as other matters are more pressing, but sport is to be had and to be enjoyed by those who can use a gun, or have any idea of training a spaniel.

As to farming profits, they are not likely to belong to either of the classes I refer to. Cheap rural life, with plenty of occupation, and as much of comfort as

can be procured for the smallest outlay. And I believe the middle-aged man who has been "dead beat" at home, and does not like to see his neighbours all so much better off than himself, can live on a farm here, (especially if he can give his farm a subsidy in the shape of a small income,) and can enjoy himself. His wife is more likely to feel the hard work than himself, and she ought to be provided with all the labour saving implements of real use, as well as himself—and one "help," in the shape of a good, active girl, is more essential to her comfort than the first-rate ploughman is to the boss." But they had better get both, and with ordinary care and the exercise of good judgment, a comfortable homestead will gradually be formed. Nothing, however, is so likely to lead to failure as to rely upon excessive cropping to meet instalments. It is this which is the cause of most of the "second hard bits" encountered by farmers who have already been "hit hard" at home. When a man spends \$2 per acre in ploughing, \$2 for seed, and \$2 for harvesting, and cultivates 10 acres, he stakes \$210 on the chance of getting 20 bushels per acre, or netting \$560. The odds are greatly against his getting \$360. His \$210 are gone, and his instalment is due, with little more than the interest in hand to meet it. Now if he cultivates 20 acres properly, or 15 acres, which he could do without extra help, except perhaps for drawing some manure, not from the town, because we presume that is out of the question, but from his swamp, he would make the first crop off 15 acres of worn out land as good as if he had attempted to cultivate 40 acres, and get more grain.

Bees are social gatherings more useful than ornamental, and perhaps a threshing bee is not the kind of society your correspondent would prefer; still they are unavoidable. And as my neighbours are in my debt—i. e., as to *Bee* work—I am going to get up a "Muck Bee" for driving muck from the swamp to the upland, and I think you will agree with me that the experiment is worth trying, and if these *Bees* become more common, the threshing "*Bees*" will be a good deal cleaner, the "*Bees*" will be less dirty, less like chimney-sweepers than they now are; their eyes and mouths less choked with thistle dust and down, and the man who has to carry away the grain will not have so easy a place, nor the threshing machine owner be so reluctant to thresh by the bushel as he now is. I hope, therefore, you will put in a plea for the old adage, "Muck is the Mother of Money,"—and there are few farms in Canada which have not an abundance of muck of the best description, only requiring *Bees* to collect it.

Yours truly, SIMPLEX.

## Farm Work for October.

In this delightful autumn weather, while the condition of the soil is so favourable for such employment, and the atmosphere is so bracing to the nerve and muscle of man and beast, we desire to call the attention of our readers to the importance, in an economical point of view, of *fall ploughing*. In this climate, our seed time is always short and hurried, and when we postpone all our ploughing to the spring, with our best endeavours we are liable to fail in being up to time in planting and sowing. The experience of all farmers who observe carefully the "reason why," has demonstrated that whatever work can be done in the fall to anticipate or shorten the labours of the spring, is so much clear gain, and the difference of a single week in the time of putting in a crop of Indian corn or other grain, has been proved by repeated experiment to be sometimes equal to the loss or gain of half the crop.

We are well aware of the advantage to a growing crop, of turning under sward ground in May, after the grass has got a good start, and the fermentation of the grass and its roots in the soil is equal in its effects to a pretty good dressing of manure. But the present is an extraordinary season, and in pastures not closely fed there is at this time a very good growth of grass; and to turn the sod under now, the same beneficial effects will be realized, for there will be no considerable fermentation of the vegetable matter in the soil until spring, and we gain largely in exposing it to the action of the frosts in winter, to say nothing of the saving of time when work is driving, and we are hurrying for our lives to get our seed in at the proper period to secure an adequate return.

It is an old but very true saying that "Muck is the mother of meal," and we have great faith in the muck; but it is an awful waste of time and labour to cart muck into the barn-yard or hog-pen at this season, and cart it out again in the spring. It is a much better way to draw out all the manure now on hand to the place where it will be wanted in the spring, and make your compost heap in the field. If muck cannot be had, use sods, surface soil, the

scrappings of the roadside ditches; mingle all together, put on a good coating of loam outside, and "let it sweat." After doing this very needful and profitable labor, it is best to fill up the barn-yard and hog-pen with new material from the meadows and the fields, and reserve from the butcher-knife swine enough to keep it well mingled with the voidings of the cattle during the winter. By this means the manure heaps will be largely increased at a great saving of expense and labour.

At this season, pork can be made very rapidly by judicious feeding. Hogs thrive best upon mixed food, and we should see to it that the swine intended for slaughter do not have their appetites cloyed with an excess of Indian meal; but that a due proportion of boiled potatoes and pumpkins goes into the trough, together with all the sour milk we can spare, and the slops from the kitchen. In feeding pumpkins it is well to remove the seeds, for they produce an effect upon the animal organization, which is unfavorable to man or beast, and although they contain much nutritive matter, its benefits are counteracted by elements of an opposite tendency.

The present is one of the best months in the year for the manufacture of butter and cheese, but milch cows are liable to fall off in the quantity of milk after the first severe frosts. To guard against this, we should be careful to have them warmly housed, and fed at night with all they can eat of good rowen or well-preserved stalks. It is not possible to obtain all the milk they are capable of yielding, if they go to bed hungry. Every additional mouthful that we can persuade them to eat comes into the milk-pail with interest, or improves their condition, especially if we provide salt for them whenever their appetites seem to demand it.

No prudent thrifty farmer will neglect his wood-pile; but this is emphatically a work for rainy days, and there will be enough of them between this time and "thanksgiving," which ought to be supplied in sawing and splitting a sufficiency of dry wood to keep the kitchen fire going without bellows, and to diffuse a cheerful warmth in the parlour fire-place or sitting-room stove. It is a sign of a "shiftless" farmer to see green wood only cut up from day to day, and the women folks trying to cool dinner with sticks from which the summer's sun has not evaporated the moisture.

A warm barn saves a large per-centage of winter fodder; and while the weather is pleasant it is the time to batten up the holes, chinks, and crannies, if there are any. We hate to see a good milch cow dis-counting from two to three quarts a day from her actual milk-producing capacity, just because there is a board or a batten off the barn close to her stall. Now is the time to make all snug, and the hammer and nails should be freely used wherever there is occasion for them.

Young stock at pasture should now be carefully looked after. Before the nights are severely cold, if in distant pastures, they should be brought home and comfortably housed. Some people say it "*toughens*" them to lie out in the cold until the severe weather sets in. Such a theory is against all reason and common sense, and those who advocate it ought to try the experiment a little while upon themselves. No animal can shiver with the cold without a diminution of its vital forces, and this involves a loss of fat and flesh. Don't believe any of the "*toughening*" nonsense, brother farmers, but see to it that your animals go into the barn in good condition if you would have them keep easy and come out in good condition in the spring.

Save the cornstalks. It is a slovenly practice to leave them in the field as some farmers do. If not suitable for fodder, they should be cut up and go into the manure heap. But with a good cutter, unless the corn is left too long upon the field, a good use can be made of them by chopping fine, scalding with hot water, and mingling with Indian meal or shorts. Used in this way there is little waste, and they make a wholesome and palatable change in the winter diet.

Well-fatted poultry, it is well known, command a much better price than the lean, lank creatures, whose skins and bones so often go to market. Corn, oats, barley, and buckwheat, are all good materials for making good poultry, but there is nothing which will promote so rapid a growth of both fat and lean as ground oats and water. Next come buckwheat, potatoes and Indian meal. Poultry-raisers should bear in mind that the colour of the meat and legs makes a difference of two or three cents a pound in the price of poultry at all city markets, and if they wish to obtain the utmost profit for their rearing, they will put the knife to or wring the neck off every black or blue-legged fowl upon their premises this fall, and start anew. It is a bad policy to keep anything upon the farm that is not the best of its kind, and blue-legged, black-meated poultry ought to be abolished by those who would secure the largest profit from their fowls.—*Flowerman*.

The Crops of Canada.

REPORTS OF STATION MASTERS ALONG THE LINE OF THE GRAND TRUNK RAILWAY.

HARVEST REPORT FOR SUMMER OF 1864.

BUFFALO AND GODERICH DISTRICT.

COUNTY OF BRUCE.—Fall wheat and spring wheat considerably above an average yield. Barley is excellent. Oats very good. Pease very good. Root crops a fair average.

COUNTY OF HURON.—Fall wheat a fair average. Spring wheat has suffered from drouth. Barley a good crop. Oats a fair average crop. Flax, a few acres sown for the first time in this county and promises well. Pease a fair average crop. The yield of root crops will be small. The hay crop in both counties is an average one.

SKAFORTH.—In the townships of Tuckersmith, Stanley, McKellop, Nay, Osborne, Morris, Gray, Norwich, and Turnbury, there are 46,585 acres of wheat sown, which will yield an average of about 18 bushels per acre.

CARRON BROOK.—Spring wheat will yield at least 15 bushels per acre—but little fall wheat. Both are excellent samples, far superior to those of last season. Oats average crop. Pease good. The growing of flax is beginning to attract attention. Quantity of grain likely to find its way to market from this district may be estimated at 70,000 bushels.

MIRCHELL.—The grain crops are generally good and will average 18 or 20 bushels per acre. Fall wheat is excellent. Coarse grains good. Root crops not quite an average.

TAVISTOCK.—Spring wheat over average crop and good sample. Fall wheat, barley and pease average crops. Oats under average crop. Root crops a good yield. Potatoes very inferior.

PLATTSVILLE.—Fall and spring wheat under average yield, good quality. Pease good. Oats and barley light. Root crops promising.

BRANTFORD.—Crops are poor. Fall wheat 8 bushels per acre, good quality. Spring wheat 8 bushels per acre. Oats and pease good crop and good sample. Barley, good crop.

CALEDONIA.—Fall wheat about 10 bushels per acre. Spring wheat 14 bushels per acre. Quality good. Barley 15 bushels per acre, good sample. Oats 18 bushels per acre, quality good. Pease 20 bushels per acre; quality good. Root crops almost a failure.

CANFIELD.—Pease, oats, barley, spring wheat and hay, very light crops. Fall wheat far below average crop. Potatoes very light crops. Other roots a complete failure.

DUNNVILLE.—Fall and spring wheat below average. Barley bad yield. Hay average crop. Pease poor crop. Small patches of flax grown.

PORT COLBORNE.—Fall wheat nearly up to average. Spring grains are poor, not averaging more than half a crop. Root crops have also seriously suffered.

FORT ERIE.—Fall wheat below average, sample fair and full. Hay below average, sample good. Spring wheat, oats and barley, very little sown and below average crop. Pease, large breadth of land sown, quality and quantity light.

BUFFALO.—Grain and root crops are extremely light.

DETROIT DIVISION.

UTICA PLANK.—Fall wheat 10 bushels per acre. Oats 7 bushels per acre. Corn and potatoes, average crop.

MOUNT CLEMENS.—Fall wheat, three-fourths of an average. Spring wheat a little better. Barley crop light.

NEW BALTIMORE.—Fall and spring wheat, half a crop. Oats, 20 bushels to the acre; quality good. Potatoes, two-thirds crop. Fruit, full crop. Beans more than a full crop. Root crops, full crop.

RIDGEWAY.—Fall and spring wheat and coarse grain are far below the average. Potatoes, a third of a crop.

PORT HURON.—Fall and spring wheat in quality is very good, but will only yield about 25 bushels to the acre. Coarse grains are very light. Root crops nearly a failure.

WESTERN DIVISION.

FORREST.—Grain crop is below an average yield per acre, but the increase of land planted will bring the total crop to an average yield. Quality of all grain is good. Root crops below an average.

PARK HILL.—Wheat crop rather light, quality superior. Oats good. Pease fair crop and good sample. Root crops below an average.

LUCAN.—Fall wheat above the average. Coarse grains very light. Root crops below the average.

ST. MART'S.—Fall and spring wheat slightly below the average. Sample is excellent. Coarse grains and roots much below the average.

LONDON.—Fall wheat on high land below an average, but that sown on low-lying lands is an excellent crop. Spring wheat is a good sample and average yield.

SHAKESPEARE.—Fall wheat heavy and good. Spring wheat, good crop. Oats, barley, and pease will yield well. Root crops promise well.

HAMBURG.—Fall wheat, good quality, below an average yield. Spring wheat, fair quality, below an average yield. Barley, fair quality, below an average yield.

BADEN.—Fall wheat is above an average, and good quality. Spring wheat is below an average, but quality is good. Oats and barley are below an average crop. Flax is fair and good crop. Root crops are a good average yield.

PETERSBURG.—Fall wheat will average about 25 bushels per acre. Spring wheat, 20 bushels. Coarse grain, 30 bushels. Root crops, about 40 bushels.

BERLIN.—Fall wheat, excellent quality, but the yield will be light. Spring wheat, good quality and fair average. Root crops below an average. Hay is exceedingly light.

BRESLAW.—Spring wheat is below an average crop. Fall wheat and other grains a good crop.

GREEN.—Fall wheat, average crop, of excellent quality. The seed wheat show was held here on the 26th, and pronounced by the judges to be the best for quality and quantity ever held in Guelph. Spring wheat, below the average yield. Pease light. Oats will yield well. Barley below an average. Potatoes not plentiful. Turnips average.

ACROS WEST.—Fall wheat, good sample, 20 bushels per acre. Spring wheat, good sample, 18 bushels per acre. Pease, 12 bushels per acre. Oats and barley, 20 bushels per acre. Root crops good.

LIME HOUSE.—Fall wheat, poor crop, middling quality. Spring wheat, middling quality, good plump grain. Oats and pease average crop. Root crop very inferior.

GEORGETOWN.—All grain crops very poor. Hay very light crop. Turnips an average crop. The crops north of here are very good.

NORVAL.—The crops are far below an average. About six miles north of this station, the crops in general are of an inferior quality. Flax yielded about 2½ tons per acre.

BRAMPTON.—In Chinguacousy, the wheat crop is very bad. In the northern parts of the townships, the wheat is better, and in Caledon it will be a fair average.

MALTON.—Fall and spring wheat very poor. Barley will average 25 bushels per acre, and a good sample. Oats fine crop and good sample. Pease a fair crop. Hay average crop. Root crops very poor.

WESTON.—Fall wheat a failure, spring wheat none. Coarse grains and roots average.

CENTRAL DIVISION.

TORONTO.—Oats fair. Pease plentiful. Roots and pasturage very good. Wheat crop variable. The north has suffered from drouth and fires. In the east good. West, midge has done much damage. In the township of York many farmers cut down their wheat as it ripened for fodder. On the whole the crops will be above average.

SCARBORO.—Grain and root crops below average. PORT UNION.—Fall and spring wheat good quality—yield 15 bushels per acre. Rye very good; yield 30 bushels per acre. Barley very good, 30 bushels per acre. Root crops below average.

FRENCHMAN'S BAY.—Fall wheat average crop. Root crops below average.

DUFFIN'S CREEK.—The wheat and coarse grain crops will be very good, much better than last year. Barley poor. Root crops very good.

WURRY.—Fall wheat above average yield and good quality. Spring wheat below average. Barley above average. Oats good crop. Potatoes and carrots light crop. Turnips average crop. Hay average crop.

OSHAWA.—Fall wheat good quality; yield twenty bushels per acre. Spring wheat good; yield twenty-five bushels per acre. Coarse grains average crop. Root crops, general appearance, promise 400 bushels per acre.

BOWMANVILLE.—Fall wheat, spring wheat and barley are above the average crop. Rye, oats, pease and corn an average crop. Root crops not quite as good as last year.

NEWCASTLE.—Spring wheat good. Fall wheat good. Barley good. Oats poor. Rye below an average. Corn below an average. Pease below average. Root crops below average.

NEWTONVILLE.—Fall wheat, not the usual breadth sown, but quality good. Spring wheat an average crop. Barley and hay good. Oats light crop. Potatoes small.

COUNTY OF PETERBORO'.

Spring and fall wheat below an average yield. Barley below average. Root crops very poor.

COUNTY OF VICTORIA.

Wheat average crops and very good quality. Coarse grains and root crops below average.

COUNTY OF DURHAM.

Spring and fall wheat, average crop and good quality. Coarse grains and root crops below average. The export from this port cannot be expected this year to exceed 200,000 bushels wheat (including flour).

COBURG.—Spring and fall wheat, good average crop. Coarse grains good crop. Early potatoes good, late poor. Hay good crop. Root crops below average.

GRAFTON.—Spring and fall wheat, good sample and average crop. Hay good quality and average crop. Coarse grains and root crops below average.

COLBORNE.—Crops are of good quality and large yield. Root crops not very good.

BRIGHTON.—Crops in general are below an average. Crops are much better in the back country.

TRENTON.—Fall wheat will average 25 bushels per acre. Spring wheat 15 bushels. Rye and barley 20 bushels, and pease 15 bushels. Root crops below average.

BELLEVILLE.—Fall wheat yields about 25 bushels per acre. Spring wheat below average crop. Barley and pease below average. Rye average crop. Oats very good crop. Roots poor crop. Hay good.

SHANNONVILLE.—No fall wheat and root crop of any account. Spring wheat and coarse grains will average about 6 or 8 bushels per acre. Barley is only likely to be shipped from here.

NAPASÉE.—Spring and fall wheat and rye below average, but good quality. Barley, pease, oats, corn, and potatoes are below average yield and of poor quality.

EARNESTOWN.—Fall and spring wheat and coarse grains are below average crop. Root crops are an average yield.

KINGSTON.—Fall and spring wheat about average crop. Oats, barley and pease a fair crop. Rye best for many years. Root crops about an average. Hay excellent.

GANANOQUE.—Hay very light. Wheat, nearly an average crop, and of good quality. Pease and oats, very good crop. Potatoes, very good crop.

LANSDOWNE.—Wheat good, but not much raised. Other crops very poor.

MALLETTSVILLE.—Hay below an average. Rye, good crop. Fall and spring wheat not sown. Oats and barley below an average. Straw very short, and heads badly filled. Pease very light. Root crops will be poor.

LYN.—Spring wheat below average crop. Coarse grains, barley, rye, pease and oats above an average crop. There have been upwards of 300 acres of flax sown this season, which has not turned out very well, a great deal has been mowed for seed only, the fibre being very poor.

BROCKVILLE.—Wheat, oats, and pease below an average crop. Barley and corn, a fair crop. Rye good. Hay light. Root crops look well. There are about 1,000 acres of flax sown. It will, however, not exceed half a crop. The quality is good.

MAITLAND.—All crops very light and below average yield.

PRESOTT.—Wheat, oats, barley, &c., are below an average crop. Root crops below an average.

MATILDA.—Wheat, very little sown, and below an average yield. Barley, oats, pease, corn, and buckwheat, an average crop. Potatoes below average. Other root crops, not much grown.

WILLIAMSBURG.—All the crops are below an average yield. A considerable amount of flax has been raised, with the promise of fair returns.

AULTSVILLE.—The wheat crop is better than last year. Coarse grains, below an average. Hay, a good crop. At Winchester and Finch, coarse grains are good. Root crops good.

DICKINSON'S LANDING.—Wheat, very little sown; the quality, however, is good. Oats and barley, below an average yield, but good quality. Pease an average crop.

CORNWALL.—The yield of wheat is the most plentiful which has been gathered for several years; the grain is full and sound. Pease, barley and rye are abundant crops. Hay good.

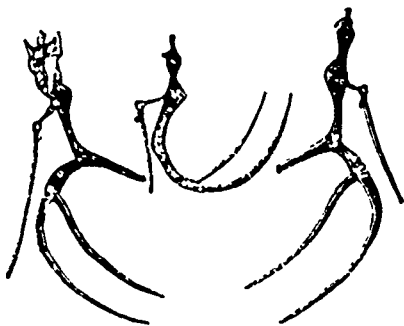
LANCASTER.—The crops in this vicinity are very good. Of our principal crops, oats and barley, a much larger quantity has been planted, and now promises more than an average yield.

COTEAU LANDING.—The crops are nearly or quite equal to the last year, with the exception of barley, which will be a short crop.

ST. ANNE'S.—Wheat an average crop.

PT. CLAIRE.—Wheat very good. Barley, oats and pease, very good. Potatoes also good, but very small.

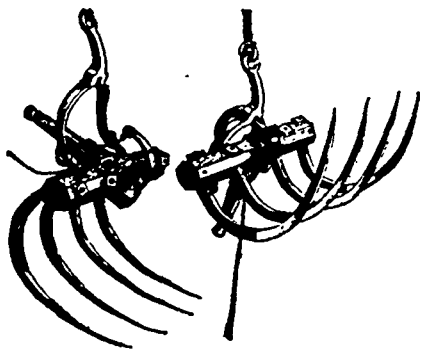
## Horse Hay Forks.



Among recently invented labour-saving implements, the horse pitchfork deserves a high place. Lightening as it does one of the severest forms of outdoor toil, and expediting work at a very busy season of the year, its value is great. Practically, this implement is but little known in Canada. My curiosity is being excited in reference to it, and we have received several letters of enquiry about it. By way of reply to them, we give herewith some illustrative cuts, which pretty fully explain themselves, and will convey a sufficiently clear idea of the principle and operation of this useful contrivance. The above cut represents Halsted's Patent Horse Hay Fork, one of the best in use. It weighs less than 18 lbs. It is so balanced that it will take up a greater or lesser amount of hay without dribbling it from the points of the tines. When power is applied, the points turn up, throwing the weight into the bend of the fork, relieving the strain upon the points, and lessening the leverage. The bale when thrown back serves for a handle, being entirely out of the way when pitching through a window, or in any place where the room is limited. It is made of iron and steel in the most durable manner, having no wooden head to split, and allow the tines to get loose.

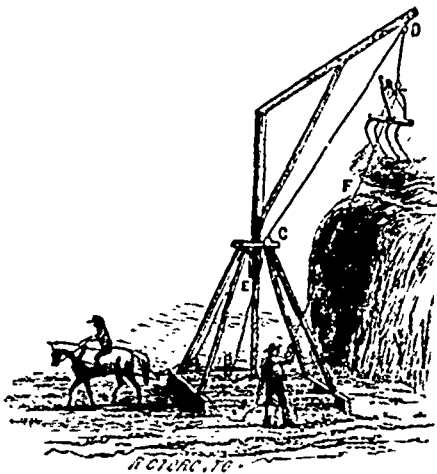
J. Fleming & Co., of this city, have some of these forks on exhibition and for sale.

The next cut illustrates Rundell's Improved Hay Elevating Fork, invented and manufactured by R. J. Rundell & Bro., Chicago, and very much used in the Western States. The figures in the cut show it both in and out of gear. The operation of the machine is as follows: When the fork is loaded it is perfectly balanced by the position and crook of the shank.



The hoisting power is then applied, and the load elevated to the desired point; when this is achieved, the farmer pulls the disengaging cord, the catch is detached, and the fork swings on the eyebolts, and lets the load slide off. The position of the fork and the parts thereof is shown in the left hand figure. The fork can then be inserted into another mass of hay, the shank lowered down by the fall so that the catch hooks over it, and the process is repeated at will. The disengaging apparatus is secure, and has a square hold on the shank when hoisting yet it works so easily, that the operator, be he who he may, is able to disconnect it with one pull of the little finger. This fork was on exhibition at the Provincial Show in Hamilton.

A good derrick is very much needed in all outdoor operations with the horse pitchfork. We gave a cut of one in our issue of Sept. 1st, which is easily made, and answers a very good purpose. In field-stacking with the simple pole derrick, it is difficult to prevent the rising forkful from dragging on the side of the stack. An improved derrick is shown in our next cut, which obviates this completely. It has been recently patented in Illinois, and is well spoken of by those who have tried it. It is of simple construction, and almost any farmer might make one for himself. In using it the crane part is swung round to the load of hay, the forkful is raised perpendicularly from the load, to any desired height to 25 feet, and by a simple contrivance of weight and lever attached, the crane is made to swing around over the stack or rick, depositing the hay just where needed, without in any manner disturbing that al-



ready deposited. With any good fork it makes a very complete arrangement for stacking hay or straw.

**UNHEALTHINESS OF ARTIFICIAL MANURES.**—Attention is called to this subject by a correspondent of the *Mark Lane Express*. He thinks that this is one cause of disease so prevalent this year in England among turnips. He cites the expressed opinions of several practical farmers of the injurious effects on sheep and cattle of roots cultivated by the use of artificial manures. A laudable desire, he remarks, to increase the productions of the earth has led to the introduction of powerful manures, without sufficiently studying the laws of physiology.

**RUST ON WHEAT.**—A correspondent of the American Institute Farmers' Club in Indiana, says that rust on wheat is caused by dew or gentle rain, or fog, remaining on the stalk or leaf of the plant, and the hot sun coming out immediately after and heating these minute drops and scalding the plant. He proposes as a remedy, the disturbing (when there is no wind to do it for you) of the growing wheat, by a long line, with a man at each end, and dragging it over the top, bending each stalk over, and causing the particles of water to collect and run down in drops.

**HOW A GRASS CROP WAS MADE.**—H. Lewis stated at a meeting of the Little Fall Farmers' Club, N. Y., that on 25 acres, he cuts grass enough to feed fifty head of cattle. This is the result of underdraining and top-dressing, with sawdust used to absorb the liquid excrements of his stock. He regards the liquids as more valuable than the solids.—The conclusion had been arrived at by experiments. Stakes had been set in pastures and meadows to note the effects of liquid and solid manures, and the growth of grass is in favour of liquid manures. Some few years since he commenced using sawdust for the absorption of liquid manures, and spreading the compost on his grass lands, the soil responding in a remarkable manner. Lately he had used the dust at the rate of sixty bushels per week. The manure is hauled upon the land and spread out as evenly as possible with a shovel or fork; it is then brushed and completely broken up and distributed. This does on and flaccness of the manure is regarded as of peculiar advantage, since the plants rapidly appropriate their food, and it reaches a greater number. About half of the meadow is underdrained with horse-shoe tile, the drains being sunk three and one-half feet deep. On this portion of the meadow grows the largest grass.



## New Plants.

THERE are many new things continually being brought forward, but most of them are wholly untried here, and consequently we can say but little about them. Yet some of them give so great promise of being really valuable additions to our present list, that we mention now some of those that strike us most favourably, in the hope that some of our enthusiastic and enterprising cultivators will give them a trial, and report their experience through *THE CANADA FARMER*.

The first we will mention is a new shrub that will, it is hoped, prove hardy in Canada, the double flowered *Deretzia Crenata*. Its flowers are quite as double as those of the flowering almond, but larger, thickly set upon terminal spikes raised above the foliage. The exposed surface of the petals is a pure white, the under side rose-coloured. We have great confidence that this will prove a great acquisition.

Fortune's three-coloured *Saxifraga* is a greenhouse plant, of very beautiful variegated foliage. The leaves are green, blotched and deeply edged with white, and tipped with deep pink. The colours vary very much in shade in the same plant, according to the age of the leaves. The leaf stalks are blood-red. It will be very useful for hanging baskets.

*Spiraea Callosa* alba, a white flowered variety of *Spiraea Callosa*. It is said to be very ornamental when planted alternately with the rose-coloured *S. Callosa*, and that it flowers as profusely as that variety. In as much as the rose-coloured one proves to be quite hardy here, there is every reason to expect that the white variety will also endure our climate well.

A red flowering locust tree—*Robinia Pseud-acacia*—has also been obtained from the Lower Alps. The flowers are as fragrant as those of the white flowered variety. Planted with common well known locust these red flowering kind must produce a very pleasing effect.

A new Berberry, called *Berberis Stenophylla*, having orange-coloured flowers in great profusion, which hang in racemes of from three to five together from the leaf axils, and bearing purplish-black berries about the size of currants. A very handsome shrub.

## To Destroy the Gooseberry Caterpillar.

A WRITER in the *Florist and Pomologist* uses the hellebore which was recently recommended by one of our correspondents in a different manner from the one that he suggests. His method is to take an ounce of hellebore powder and two ounces of powdered alum, dilute these first in a small quantity of water so as to get them thoroughly mixed, then add a gallon of water. Apply the mixture to the bushes either by wetting them with a syringe or waterpot over the upper surface of the leaves. The caterpillar will drop soon after feeding upon the leaves. The writer adds that having used it in this way for a number of years he has always found it most effectual, and that although the hellebore powder will destroy these pests when it is dusted on dry, yet it can be better applied when thus diluted. The principal use of the alum is to cause the powder to adhere to the leaves. This preparation will need to be applied again after any considerable shower of rain, unless the caterpillars have been all killed by the first application.

**PRESERVATION OF FRUIT.**—At the Russian Court fruit is preserved by being packed in creosotized lime. The lime is slacked in water in which a little creosote has been dissolved, and is allowed to fall to powder. The bottom of a plain deal box is covered with it one inch high, and over it is a sheet of paper. Upon this the fruit, well selected and cleaned, is arranged; over this another sheet of paper, and on top of this another such stratum of prepared lime; in the corners a little finely-powdered charcoal is put. The whole box is then filled in the same manner, and the well fitting lid nailed down. Fruit kept in this manner will remain intact at least one year.

### The Whitesmith Gooseberry.

HEREWITH we give a superb engraving of the Whitesmith Gooseberry, one of the best English varieties for cultivation in this country. The accompanying cut faithfully represents, as to size and general appearance, a bough of the present year's growth, obtained from a garden in the vicinity of this city. As commonly cultivated, it is very seldom that such berries as our artist has delineated are produced. Left to a sort of half wild, straggling growth, choked with grass and weeds, as is too often the case, it is no wonder if small fruit and of very inferior quality, are the only returns obtained. The gooseberries we have illustrated received only ordinary good treatment, such as every gardener, whether professional or amateur, ought to bestow upon his plants. Had the bush been petted, and the fruit 'sucked,' to use a well-known phrase, a much larger growth might no doubt have been attained. Hundreds of cottage gardeners in the north of England make gooseberry growing a specialty, and very keen competitions

occur at the local shows. It is astonishing to what a size this fruit may be forced by the various devices known to the initiated. Among the smaller fruits, the gooseberry deservedly takes a high rank, but a serious difficulty stands in the way of the larger English varieties in this country, viz., their extreme liability to mildew. This is a serious drawback and formidable discouragement. The fruit sets well, but when it has made about half its growth, a strange blight falls upon it, part of it drops off the bushes, and what is left ceases to grow, and is destroyed by a sort of living decay. This mildew is a somewhat mysterious affection. Good culture, pruning, and mulching will

mitigate it to some extent, but a really effectual remedy is yet to be discovered. Some parts of the country, and certain seasons are more subject to this ailment than others. Particular varieties appear more readily to fall a prey to it than others. The Whitesmith and Crown Bob are, on the whole, rather less liable to this evil than some other kinds, and this, in connexion with their excellence, renders them desirable sorts for cultivation among us. There are some seedling gooseberries, natives of this country, which seem entirely proof against attack from mildew. The best of these is Houghton's Seedling. It is small in size, and only of moderate excellence as to flavour.

may also be advantageously bottled for winter use, according to the following method, which we find highly recommended in the *Illustrated Register of Rural Affairs*:—

"The process is exceedingly simple and easy, no heat or cooking being required. Pick the berries while yet quite green, and before the ripening process has even commenced. If done later, they will not keep. Clip off the stem and calyx with sharp scissors, and then pack them in glass jars, shaking them down well, and pressing them closely, but not so as to crack or injure them. Then cork them, rendering the bottles tight with grafting-wax or sealing-wax. Place the bottles in a box in a cold cellar, imbedded in dry sawdust. They will be in fine order the following winter."

They also keep nicely, and preserve their natural flavor, if scalded and partially sweetened in the way fruit is prepared for preservation in self-sealing jars and cans. The keeping of fruit of all kinds on this last named plan, has much to recommend it, particularly on account of its retaining the natural taste and requiring but little sugar.

A wine may also

be made from this fruit, which is much commended for its rich and peculiar flavour.

but it is a profuse bearer, hardy, and seldom fails, whatever the character of the season. We recommend our readers to plant the Houghton as their main dependence, but they should by all means add to it some of the standard English varieties. They are well worthy of being cultivated, if it be only to obtain occasionally such tempting clusters of berries as our engraving represents. Each berry is a mouthful, and there is hardly a more luscious fruit on the gardener's catalogue than a good, ripe, gooseberry.

Gooseberries are not only an excellent fruit for dessert, but they make a rich preserve, and are greatly prized as such by all housekeepers. They

THE ANEMONE.—All will admit, who have ever seen the Anemone in bloom, that it is a most beautiful flower. The colours are exceedingly brilliant, and the markings, stripes, and belts charming. Double and single are both desirable—the single the most brilliant in colour. The Anemone has not been grown generally, because it has been thought too tender to bear our winters; but we have never failed of a good show when roots were put out in the autumn in a dry place and covered with leaves.—Vick.



## The Culture of the Amaryllis.

M. VAN HOUTTE, the well-known cultivator of bulbs, in his recent catalogue, gives the following particulars of his method of treating the Amaryllis.

The bulbs pass the winter on the shelf of a temperate greenhouse in the pots in which they have grown, and during this receive no water. At the beginning of spring, say in our Canadian climate about the first of March, they are repotted in fresh earth, composed only of decayed leaf-mold, mixed with a little sand. The old soil is entirely removed, so that the bulbs are quite naked. In doing this a piece of rod is used, by the aid of which the earth adhering to the roots is cleared away without injuring them. All rotten or broken roots are carefully picked off, and the finger is passed under the base of the bulb to clear away any dead parts hanging there, the old loose skins being also carefully removed. Thus dressed the bulbs are repotted.

In repotting, the bottom of the pot should be furnished with broken pieces or potsherds, and the top of the bulb being held with one hand, the roots hanging down into the pot, the earth should be dropped in gently round it until all the roots are buried. The bulb is only to be buried up to the neck, and the earth should be only moderately heaped up. After a few days the pots are placed in the proper temperature, either moderate or hot, according to the time when it is desired that the plants should flower, but no water at all is given them until they start, and even then very little should be given at first. When the plant is growing with full vigour, then the waterings must be abundant.

After flowering, the plants with their pots should be plunged, in the full sun, in garden soil or in old tan, continuing the waterings so long as the vegetation is vigorous, but afterwards discontinuing them altogether, and allowing the plants only such moisture as falls from the sky. The pots are to be removed from the position as soon as the atmosphere grows cool, and they are then to be placed without receiving a drop of water, on some elevated shelf of the greenhouse, where the leaves will wither and the bulbs again become dried. In this way the plants are brought into that state of repose which is altogether indispensable if it is desired that the flowers should create astonishment in the following season.

## The Culture of the Perpetual Carnation.

THE Perpetual Carnation, on account of its vigour, accommodates itself to all soils, but it prefers open manured ground, through which water will pass readily. The soil should be rather freely manured and the manure dug in deeply. The surface of the ground should be occasionally broken up with a hoe, especially after much rain, in order to break the crust, which hardens under the action of the sun. They require water but seldom, but it should be given plentifully. In order to obtain strong plants, cuttings should be put in at the end of April or the beginning of May; they will then yield a very fine show.

To preserve the plants for several years and to keep them dwarf, it is necessary to shorten each flower stalk, after the bloom is over, to some two or three inches above its base. In this way there will be obtained every year a great quantity of flowers. To enjoy the flowers in winter the plants should be put in a temperate greenhouse, giving them air as freely as possible. They ought to go into the house only when in flower or bud, because the buds restrain the ascending growth of the stalks. If they are put into the house before the flower stalks are provided with buds the stalks will lengthen out, and in the spring yield only some misshapen flowers. In the month of October the plants should be re-potted with fresh earth, in pots of five or six inches diameter. They afterwards require shading for eight or ten days, and should be removed to the house only when they become liable to suffer injury from frost. Those plants which do not produce flower buds may be wintered in a pit, which can be covered with a frame and mats during intense cold, but it is necessary to avoid too much moisture. They will survive in the open ground, if it be well drained, but in this case it is prudent to cover them with straw, in order to shelter them from the sun, which is so fatal to plants when they have been frosted.—*Gardener's Chronicle.*



## The Breeder and Grazier.

### The Cause of Inferior Stock.

SOME farmers sell or slaughter their best stock of mares, ewes, or cows, and thus cut off all hope of any improvement at one blow. Does a heifer show a disposition to fatten easily? She is encouraged to feed until fat, and is then sold and eaten, while her fellows, who belong to the same breed with Pharaoh's lean kine, are kept for milk or rearing calves, because they are not and cannot be made fat for the butcher. Has a farmer a sow-pig which becomes fat upon the feed on which the rest of his pigs are starving? He gives her over to the butcher's knife and propagates from "land shads" and corn cribs.

Has he a fine, round, bright-eyed ewe? She will be fat about the time his half-filled pork barrels are empty and she is stripped of her fair skin and fair proportions simply because she is worth the trouble of killing; and thus many of our farmers perpetuate a breed of animals that are a disgrace to the country. They seem uneasy while they possess an animal that will draw the attention of their neighbours or the butchers, and woe be to it if it put on a better appearance than its fellows, for from that time its doom is sealed.

To improve breed of animals, it is by no means necessary to incur a great expense in bringing animals from a distance. If a farmer will mount his horse and ride across the country some fine day, and view the stock of his neighbours, he will soon perceive that there are abundant means of bettering his circumstances by a cross or exchange, at a slight cost, and he by this plan of improving his judgment by comparison, and hoarding up experience for a future day that will be of more value to him than the expense of many such excursions; and improvement once begun and persisted in for a short time, will produce such a corresponding improvement in the mind and circumstances of the farmer as will insure its continuation, and richly reward all his labour and outlay.

Many of our farmers destroy the hope of improving their stock by a system of false economy in the selection of the males from which they breed their stock, many do not keep a male from which to breed their horses or horned stock, nor is it necessary as one will do for a neighbourhood; but this one should be the best; and in order to keep a good one, a good price must and should be charged for his services.—*Am. Stock Journal.*

## Raising the Calf.

A HINT TO CRUSTY OLD FARMERS.

"Isn't she a beauty, father? Only see what a handsome little head she's got, and how fat she is. I don't believe there's another calf in town that can beat her."

"That's just what I think, Nathan," replied the farmer, without raising his eyes from his axe-grinding. "She'll do to kill by Saturday. Joel Smith wants part of her. We might as well sell the whole, for the head and pluck will be as much as we shall want this hot weather."

"Don't have her killed, father. Why can't we raise a calf as well as other people? Ford said when he was getting the hay yesterday that it was a shame to have all of old Brindle's calves killed, for she was the best breed of cows anywhere about. You know what a pailful of milk she gave all last summer, and that you got the premium on her butter."

"Well, I know all that, boy, but she would cost more than a hundred dollars before she would bring a cent. If anybody is fool enough to raise them when they can buy them all ready for milk at \$20 to \$30, let them do it. I'm too old for such calculations."

"Perhaps it is so, but I can't bear to have her killed. If you will let her live I will take all the care of her, and raise a bed of carrots for her to eat next winter. Why, she shan't trouble you any."

"Your mother wants the milk right away, to make all the butter she can this month, and if we keep 'so calf she must have it two or three weeks longer. Then, what will you do with her this summer?"

"Oh, let her go in the pasture with the cows. She can eat a little clover now; I fed her with some yesterday. Ford said she would eat almost anything in a little while."

"It would make pretty work to have her run with her mother; she'd take all her milk each day."

Here Nathan was at a loss for another plea, when he happened to think of the little orchard, and proposed to put her in there. But his father told him she would eat the sour apples that fell off and spoil her teeth. He thought he could put Bossy in her pen at night, and get up early enough in the morning to pick up the apples. Several other objections were raised and met with the same boy-earnestness, when his father told him to go to his work and he would see about it. This "see about it" gave the boy some encouragement. He thought it would be a good plan to get his mother on his side. When he went into the house he found her so busy in soap-making that all he could get from her was, "Just as your father thinks best about it; I shall want the rennet, for I am going to make cheese in dog-days. The butter isn't worth much that's made then." Here was something new for Nathan, who did not know what rennet was for, or where it came from. When his mother told him it was the calf's stomach, he thought it would be an easy matter to get one of some of the neighbours who never made cheese. A few mornings after this conversation, farmer Gaines asked his wife what she thought of letting Nathan raise the calf. Her reply was, "You know best about it, father. I should like to have the boy gratified, if it don't make you too much trouble." What an excellent lesson this reply was to all dictatorial, unthinking wives, whose opinion must rule, or there will be a drizzle or storm within and without.

Nathan heard and said nothing about Bossy for a week, expecting every day that she would have her throat cut, loving her all the more with the fear of losing her. In the meantime the farmer had been resolving the subject in his mind, and came to the conclusion that if keeping the calf would make an early riser of his boy it would be worth while to try it, for the summer at least, when he thought he would get enough of taking care of her, and be glad to have her sold in the fall to the drovers. No farmer could have been more pleased with a present of the best Devon or Ayrshire cow, or seen from her a better prospect of wealth, than did Nathan Gaines when his father told him he might keep the calf, if he would take good care of her, and raise all the roots she wanted for next winter. All this he promised to do, and anything else that was desired. Never had he so high an opinion of his father before. This unexpected favour made obedience a very easy matter. Every morning Nathan was up bright and early to take care of his calf and look after his carrot bed, so as to be ready for any other work. Bossy soon became so much of a pet with the family that she never went hungry. Even the farmer, who feared so much the cost of raising her, seemed to enjoy giving her an extra bite as he went to feed his horses, and often Nathan found bits of bread and other morsels from the table, which she liked very much. When autumn came the calf had done so well there was no danger of her being sold. Every one who saw her said she was the largest and best one of the season. Farmer Gaines thought his boy had done enough more work to pay for all she ate, and if it took a ton of hay to keep her through the winter, he had no idea of having her sold. Nathan's interest in the calf never flagged, neither did he allow her to be any trouble to his father. We will pass over three years of her life, when we find young Brindle giving as much milk as her mother, and will soon take her place in the barn, for old Brindle's cow-life is almost over, and will in a year or two be consigned to the beef-barrel.

Farmer Gaines has never regretted that the calf's life was spared, for he has a better cow than he could find elsewhere, and by gratifying Nathan in this act the boy had formed habits of carefulness and industry which will be worth a fortune to him. Farmers lose nothing by giving their boys a reasonable indulgence, even if the cost is not always repaid in dollars and cents.—*Ohio Farmer.*

TO CURE HARNESS GALLS.—A *Rural New Yorker* correspondent writes:—Take dry white lead, have it fine, put a little in a paper in your pocket, and when you stop your team, or several times during the day, put a little of it on the galled places. This will soon heal."



The Dairy.

## Cheese Factories.

To the Editor of THE CANADA FARMER:

Sir, - I promised in a former communication, some remarks on the cheese factories, as they are termed, in the State of New York. In doing so I must confine myself to the general principles involved in the system, more particularly as compared with private dairies; for to enter on the minutie of practice, would require much space, even if I thought myself competent to the task.

In my recent trip to the States I had an opportunity of visiting several cheese factories in the counties of Oneida and Otsego, and a few of the best private dairies in the county of Herkimer; in the latter, American cheese making may be said to have originated, as a special branch of agriculture. Herkimer cheese has long been celebrated for excellence of quality, and in no other part of the State have private dairies to such superiority and systematic management. It was not in this county, however, that this factory system took its rise, and private dairies still prevail almost exclusively. Herkimer cheese continues to command the highest prices, from the peculiar excellence of its herds and pastures, and the great pains bestowed on this department of rural economy. I was told, however, by some of the best dairymen, that if the factory system was thoroughly introduced, they had little doubt that in time it would be generally accepted.

About twelve years since Mr. Williams, of Oneida county, conceived the idea of applying the principle of co-operation and division of labour, which has proved so eminently successful in manufacturing pursuits, to the department of the dairy, and he succeeded in persuading a number of neighbouring farmers to send their milk to a common depot, where the whole might be converted into cheese upon more economical and systematical principles than the best regulated private dairies could command. This was the first cheese factory established in the States, and it is now said that the county of Oneida alone, has about forty of such establishments, the number of cows to each varying from three hundred to one thousand. In other counties the system has made a great advance, and I am told that it is attracting attention in the different States, where the dairy forms a prominent feature of their agriculture.

Now what are the principles and advantages involved in these cheese factories? First, there are the usual benefits arising from associated capital and labour on a definite plan; and it is maintained that a better and cheaper article, far more uniform in quality, is made in this way, than can be produced in small private dairies. Cheese making is a delicate, I may almost say scientific operation, requiring a room or building properly situated and arranged, with the most approved apparatus and appliances, with no small amount of experience and skill to conduct the operations with economy and success. Now it is manifest that in most private dairies, even of the best description, some of these conditions will be occasionally absent. Sickness, difficulty of getting sufficient and reliable help, the necessity sometimes occurring for withdrawing attention and labour from the dairy, to special emergencies of the farm; these and other defects incidental to private establishments, the factory system, in a great measure, remedies. It has been found, too, in the dairy districts of N. Y., that the constant labour and care imposed on females have most injuriously affected their health. Some of the operations involved in cheese making require the strength of men, but in ordinary farm dairies they are usually imposed on women, to their evident discomfort and detriment. Now, upon the modern plan, some half dozen persons of both sexes are capable of making into cheese the milk of a thousand cows, thus

relieving the female portion of the farmers' family from what is not unfrequently felt to be exhaustive and injurious labour.

Cheese factory associations may be organized by ten, twenty, or more farmers, according to the number of cows kept by each, living within a convenient distance of each other. It is usual for some one or more to erect the necessary building, and furnish the utensils and hands to carry on the operation of making the cheese at a fixed rate. That rate is one cent a pound; an amount which, in the present state of American finances, and the much increased price of cheese, is thought to be insufficient. The whey usually belongs to owners of the factory, and is fed to pigs and occasionally to cows. Farmers connected with the factory send in their milk at regular hours, morning and evening, which is either measured or weighed, and the result carefully entered into a book. Sometimes one or two persons will contract with the rest to deliver all the milk at a fixed rate. The milk from the different dairies is put in one or more vats, and a board of directors or committee, appointed by the members, decide at regular intervals from the returns of milk, and the amount of cheese obtained, the proportion belonging to each. The cheese, after attaining to sufficient ripeness, is sold by the directors to the agents of wholesale dealers, and the amount paid to each member. Dealers prefer factory cheese to that of private dairies, as they consider it on the whole to be of better and more uniform quality, and therefore offer a higher price. Besides both time and expense are saved to dealers or their agents, in purchasing large quantities at factories, instead of having to visit a great number of private dairies, or attend different and distant markets. These are some of the principal advantages of the factory system, which is steadily, if not rapidly, making its way in the dairy districts.

The only objections which I heard may be summarily stated. A common one, so often applied against all improvements, a disinclination to change old ways and habits. This, however, does not appear to apply to the American people in any thing like the same degree as it does to the older countries of Europe. The milk of some dairies may be above or below the ordinary standard, arising from differences in pasture, breeds of cows, &c. And in some instances the milk may arrive at the factory tainted or too far acidified, from want of proper cleanliness in the utensils in which it is conveyed. In other cases, which are but rare, it is believed actual adulteration has been made by adding water, &c.; matters not always admitting of ready detection. Of course such milk affects injuriously the common stock, both as to the quantity and quality of the cheese which it yields, and gives rise to feelings and disputes not in harmony with the well working of the institution. It is difficult to see how some of these objections can be fully met, but by excluding persons from the factory who willfully commit fraud, or disregard those salutary conditions so essential to the welfare of the whole body of stockholders. I am inclined to think, however, that in practice these difficulties but rarely occur. The Superintendent of the works has every motive to use his best energies for the interests of the Association, his professional character and the status of his establishment very materially depend upon the value of the article produced.

It is stated that cheese making cannot be advantageously carried on as a specialty in factories, with less than 400 cows; I found many of them with from five to seven and eight hundred. The expense of making cheese diminishes somewhat in proportion to the increase of the amount of business. The buildings need not be expensive; they are made of wood in the ordinary way of farm structures. I saw none with basements—underground places are not considered favourable for curing cheese. The vats most approved of are those made by Ralph, & Co., Utica, which admit the uniform warming of the milk with an extraordinary small quantity of fuel. The presses which I saw, were of the simplest character, consisting of a short iron screw, with wooden frame and platform. A copious supply of pure spring water must be regarded as one of the essential conditions of a factory site; and a running stream is preferable to a well. The buildings and necessary utensils for a dairy consisting of five or six hundred cows, might probably be erected for about ten or twelve hundred dollars.

The question arises could cheese factories be profitably introduced into Canada? Without attempting a dogmatical decision, I may express myself favourable to the affirmative. In some of the central and eastern parts of Canada, where the soil is naturally adapted to grass and grazing, and where cheese is to some extent already made, the system is certainly entitled to full and favourable consideration. We have a few excellent private dairies on a pretty large scale in the Province, that produce a good article, but on the whole but little can be said in favour

either of the quantity or the quality of our cheese. Instead of being importers of this article there appears no good reason why we should not be extensive exporters. It is to be hoped that such of our farmers as may be favourably situated for carrying out this enterprise, will give it an earnest and impartial consideration.

I must draw to a close this, perhaps already too long an epistle, by observing that after passing through parts of the States of New York, Jersey, Delaware, Maryland, and Pennsylvania, I returned with a deep impression of the vast resources of this portion of the American Union. In each of these States are to be seen farms and gardens that will not unfavourably compare with the best portions of Europe. The material progress has been truly wonderful. Let us hope and pray for a speedy and enduring peace, and that a people so abundantly blessed by Providence, may enter upon a new and uninterrupted career of prosperity and happiness.

Yours truly,

GEO. BUCKLAND.

University College, Sept. 21, 1864.

## Sheep Husbandry.

## The Shepherd's Dog.

In all mountain sheep farms the shepherd's dog acts a very prominent part, and especially on the rocky mountains of Cumberland, where travelling is difficult at all times, even to the ironshod shepherd, but most so in frost and snow, when hundreds of acres which the shepherd ought daily to inspect, may be so slippery and dangerous as to greatly limit his excursions. Though at all times the dog's services are indispensable, on such emergencies he will sometimes do the work of twenty persons in patiently bringing down sheep from places almost inaccessible to man under any condition.

The Cumberland sheep-dog is in no way deficient in intelligence and sagacity, but may compete with his compeers of any country, and though the selling price of a dog of ordinary qualifications does not range higher than 20s. to 40s., there are many shepherds who would make any sacrifice short of life rather than part with a good dog at any price. One or more sheep, and even a cow, have been offered and refused. In fact, first-rate sheep-dogs are not to be bought. They may be reared or bought young, and may turn out well, but no shepherd of standing will dispose of his favourite on any terms; even when broken down by adversity, the dog is the last chattel the storms of life compel a feeling man to part with, and then not without evident sorrow. Well might a popular writer say—"Without the shepherd's dog the mountainous land in England and Scotland would not be worth a sixpence." It would require more hands to manage a flock of sheep, gather them from the hills, force them into houses and folds and drive them to market, than the profits of the whole would be capable of maintaining. And though this may be more true as regards the wild and headstrong black-faced sheep of the Scottish mountains, it is also correct as applied to our own; and most of the difficulties of gathering and driving will vanish in the presence of a really good dog. The sheep seem to know, as if by instinct, before they have been many minutes under the charge of such a dog, that all their efforts to break away are fruitless, let the flock be ever so wild and numerous, or the field of operations ever so rugged and unfavourable. It is surprising to observe what cunning a drove of pure Herdwicks will sometimes exhibit in their efforts to baffle an ill-trained dog.

While the driving or gathering ground is favourable to the dog, all goes on well enough; but no sooner do the wily creatures discover a suitable opportunity than perhaps one or two break off on one side, and while the dog attempts to head them, others steal away in different directions on the other side; while the dog attends to them, the mischief increases, and nearly the whole flock will disperse, to the utter discomfort and amazement of the dog; but, if at this juncture the tactics of a clever dog are brought to bear on the flock, in an astonishing short period the whole of them will be subdued and brought into order, and may be driven without difficulty so long as the master spirit is within call. Some dogs have the faculty of discovering sheep when buried to a considerable depth under the snow, as happens occasionally. A dog possessed of this quality is of immediate value, equal to the amount of sheep he releases or marks. A single dog has been known to point out unerringly the locality of many scores of drifted sheep in a day, even when several of them were at a depth below the reach of the shepherd's snow-pole.—*English Agricultural Journal.*



Correspondence.

**NOTICE TO CORRESPONDENTS.**—We have received a number of letters, which, in consequence of the large absorption of our space by Exhibition matters, are unavoidably laid over. Correspondents will please accept our acknowledgments for their favours, and exercise patience in regard to the delay in their appearance.

**ERRATA.**—We have been requested by Mr. Sheriff Treadwell, of L'Orignal, to correct two errors which crept into his communication, under the "Weather and Crops" heading, in our last. Instead of "Sills of Vonkluck II. I," read "Wells of Vanklerk Hill;" and instead of "rye seed," read "riga seed."

**TREES UNWORTHY OF CULTIVATION.**—A subscriber, writing from Derby, wishes to know whether his pear trees, which grow in the form of a wild thorn, have leaves like a plum and send up sprouts from the roots at a distance of some yards from the trees, are worth orchard room. We should say—decidedly not.

**IMPROVED COW-MILKING MACHINE.**—A correspondent says:—"Having noticed your just strictures upon the inadequacy of the cow-milking machine, I was led to seek a remedy in its improvement. If they will be acceptable, I will send my suggestions upon the improvement of the machine for your next issue."

**ANS.**—Certainly; we shall be glad to receive them.

**THE SOFT MAPLE.**—A correspondent says:—"As a farmer, I love the soft maple above all the trees of the forest. Towards the close of winter its swelling bud gives me the first inkling that spring is coming and I get my plough ready, and now as summer is ending, its changed leaf admonishes me that winter is near, and that fall work should be commenced at once."

**THE PIPE EXCHANGED FOR THE CANADA FARMER.**—"J. M.," of Molesworth, sends the name of a new subscriber to THE CANADA FARMER, with \$1 enclosed, and adds:—"Peter has given up smoking, so that he may be able to pay for THE FARMER, and I hope that many more will follow his example, so that they may get your valuable and much-needed publication. I am glad to see THE FARMER taking a first-rate position among agriculture journals."

**CURING TURNIP TOPS.**—"F. P." of Owen Sound, asks, "Can you or any of your numerous subscribers inform me of any plan to cure turnip tops so as to make them available for winter feed?"

**ANS.**—We are not aware of any such method having been successfully practiced. Turnip tops are of such a succulent nature that we should hardly think it practicable to cure them for winter use. They make capital food for the manure heap.

**DRAIN TOOLS.**—"J. S.," of Enniskillen, enquires where a set of draining tools can be bought, and at what price?

**ANS.**—Messrs. Rice Lewis & Son, J. B. Ryan, and we presume, other hardware merchants in this city keep them for sale. The price varies according to quality, length and width of blade, &c. A common set of five, viz., two spades, two scoops, (round and square-edged,) and a pipe hook, will cost about \$6.50.

**MILDEW ON THE GRAPE.**—"B. L.," of Cobourg, says:—"We find our grapes mildewed, both leaf and fruit, in the early part of July. Clinton very much. Delaware slightly, Diana slightly, Concord not affected. Is this a general thing, or only in certain localities?"

**ANS.**—Grape vines of all kinds are more or less subject to diseases of different kinds, to mildew among the rest. Some varieties seem to be more disposed to mildew than others. All foreign grapes are very subject to the mildew. In some seasons our hardy grapes suffer more from this cause than at other times; and it is worse in some localities than in others. Particularly does it occur when the soil is not well drained and the roots of the vine are kept too wet and cold. Grape vines are particularly sensitive to cold, wet feet. The remedies are to plant only in thoroughly

drained soil, and if the mildew then makes its appearance to dust the vines thoroughly with sulphur in the same manner as is practiced with grapes under glass.

**BARK LICE ON APPLE TREES.**—"A Reader" writes from Collingwood Township:—"I send you a simple and effectual cure for bark-lice on apple trees. My trees were terribly infested with lice, so much so that many of the branches were killed and some of the trees seemed to be dying. Just before the buds burst into leaf, about the latter part of May last, I gave the trees a thorough pruning, and then gave them a good coating all over of crude shale oil, procured from the factory in this township. The oil was applied with a paint brush. The scale lice have been completely destroyed, and the trees are now healthy and flourishing, with an abundance of fruit. Crude oil from the wells at Enniskillen being similar to shale oil, would, I have no doubt, do equally well."

The Canada Farmer.

TORONTO, UPPER CANADA, OCT. 1, 1864.

Exhibition of the Royal Agricultural Society of Ireland.

THE Show of this National Society was held at Sligo during the last week of August, and from the elaborate report of the *Irish Farmers' Gazette* it appears to have been not equal to most of its predecessors. This is accounted for from the fact that Sligo has hitherto been considered as inconveniently situated for a Royal Show, but now in consequence of the completion of the Great Midland Railway, the more serious difficulties have been overcome. It is believed that the holding of this first Show of the Royal, at Sligo, will excite among the farmers an emulation to improve, and that the agriculture of a large district will thereby become advanced. Durhams in point of quality were under par, but the Herefords as a class, were superior, as were also some of the mountain breeds. In sheep, the Cotswolds and Shropshire downs excelled. The horses comprised many useful animals, particularly those for farming purposes. A great and continuous foreign demand for Irish horses tends to keep the country scarce of fine animals. In all the principal departments of husbandry, these exhibitions indicate progressive improvement.

The Provincial Exhibition.

OUR great yearly agricultural and mechanical show has again been held, and we detain this number of THE CANADA FARMER a little, in order to furnish our readers with all accessible information respecting the important event of the past week, at the earliest moment possible. This is so fast an age, and news is circulated by the daily and weekly press with such celerity, that to defer all account of the Exhibition until our next, would be to risk its becoming, with many at least, an "old story."

The Provincial Exhibition opened at Hamilton on Tuesday last, under most favourable auspices, and every thing indicated that it would prove a complete success. Its location the present year, was a most convenient one for the great mass of exhibitors, and the entries in the Secretary's books gave decisive intimation of their intention to be present in great force. At the opening of the Exhibition on Tuesday morning, the list was not quite complete, yet the number of entries had reached a grand total of 6,138. At the same stage of last year's Exhibition in Kingston, the entries were only 4,338, that is to say, 1,800 less than the present year. At the recent New York State Fair, the number of entries in all departments was 2,209. Our entries of live stock alone were nearly up to that figure, being no less than 2,194. Some eighty additional entries were made during the

forenoon of Tuesday, and the complete list at length stood as follows:—

Blood horses	15
Agricultural horses	92
Road or carriage do	268
Heavy draught do	41
Durham cattle	142
Devon do	140
Hereford do	26
Ayrshire do	69
Galloway do	71
Angus do	12
Grade do	53
Fat and working cattle	29
Leicester sheep	240
Cotswold do	99
Long-woolled do of other pure breeds	82
South Downs do	115
Shropshire Downs	17
Cheviot sheep	29
Medium-woolled do. of other pure breeds	25
Spanish Merino do	71
French Merino do	67
Fine-woolled do of other pure breeds	18
Fat sheep	37
Yorkshire pigs	26
Large Berkshire do	20
Other large breed do	15
Suffolk do	14
Improved Berkshire do	47
Other small breed do	28
Poultry	284
Grains, field seeds, hops, &c.	580
Roots, hoed field crops, flax, &c.	388
Fruit	468
Garden vegetables	459
Plants and flowers	147
Dairy products, honey, bacon, &c.	160
Agricultural implements, power	172
Do do hand	132
Cattle food, artificial manures, &c.	9
Ploughing match	71
Cabinet ware and other wood manufactures	39
Carriages and sleighs, and parts thereof	65
Chemical manufactures and preparations	38
Decorative and useful arts	79
Fine arts	278
Groceries and provisions	59
Ladies' work	371
Machinery, castings, and tools	83
Metal work, including stores	60
Miscellaneous	95
Musical instruments	30
Natural history	10
Paper, printing, and bookbinding	50
Saddles, leather, &c.	58
Shoe and bootmakers' work	63
Woolen, flax, and cotton goods, &c.	140
Foreign manufactures	27
<b>Total</b>	<b>6,220</b>

We append a comparative statement of the number of entries last year and this year, in a more condensed form:—

	1863.	1864.
Horses	381	416
Cattle	401	541
Sheep	484	693
Pigs	106	150
Poultry	189	284
Grain, field seeds, &c.	512	580
Root and field crops	285	388
Horticultural products vegetables, plants, and flowers	582	1,238
Agricultural implements, power	149	179
Do do hand	107	132
Arts department	1,142	1,548
Ploughing match	71	71
<b>Total</b>	<b>4,338</b>	<b>6,220</b>

For the Canada Company's prize for the best 25 bushels of fall wheat, there were 17 entries. Of these 6 were from Wentworth, 3 from Northumberland, 2 from Wellington, and 1 each from the Counties of Simcoe, Hastings, Halton, Waterloo, Ontario and Brant.

For the prizes for the best two bushels of white winter wheat, there were 41 entries. Of these 13 were from Wentworth, 3 from Waterloo, 3 from Wellington, 3 from Northumberland, 2 from Haldimand, 2 from Brant, 2 from Halton, 2 from Norfolk, 2 from Prince Edward, and 1 each from the Counties of Simcoe, Hastings, Oxford, Huron, Ontario and Lincoln.

For the prizes for the best two bushels of red winter wheat there were 13 entries, viz., 7 from Wentworth, 2 from Haldimand, and 1 each from Hastings, Welland, Prince Edward and Lincoln.

For the prizes for the best two bushels of Five spring wheat there were 21 entries. Of these 4 were from Wentworth, 4 from Ontario, 3 from Northumber-

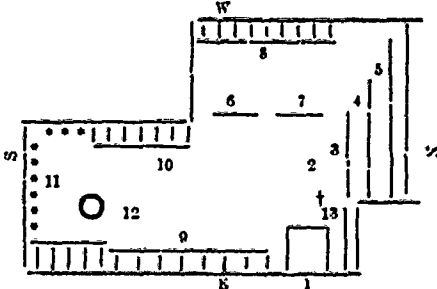
land, 2 from York, and 1 each from Lincoln, Halton, Wellington, Prince Edward, Middlesex, Simcoe, Lambton and Perth.

For the prizes for the best two bushels club spring wheat there were 10 entries, viz., 2 from Wentworth, 3 from Northumberland, and 1 each from Halton, Wellington, Prince Edward, Simcoe and Ontario.

For the best two bushels of spring wheat of any variety there were 11 entries, viz., 4 from Wentworth, 3 from Ontario, and 1 each from Halton, Northumberland, Middlesex and Peel.

#### GROUNDS AND BUILDINGS.

The exhibition grounds are so curiously shaped that it is almost impossible to give an intelligible description of them without the aid of a diagram. We therefore subjoin one, by the help of which a pretty correct general idea will be gained.



No. 1, entrance gate; 2, exhibition building; 3, carriage sheds; 4 and 5, sheep pens; 6 and 7, cattle stalls; 8, pig pens; 9 and 10, cattle stalls; 11, horse boxes; 12, horse ring; 13, poultry.

The ground consists of two oblongs, the width running from east to west, the length from north to south. The eastern oblong belongs to the city, and covers about ten acres. The other joins its north-western corner, and is of equal extent; the two together making about twenty acres. Southward the land declines gently towards the mountain, which extends round to the western side. No city in the Province is possessed of a better site for the Exhibition.

Entering by the main gate (No. 1) and turning to the left, we come first to a long row of cattle stalls, numbering about 50, open in front, each capable of containing several large animals. They are substantially constructed, nicely whitewashed, and look clean and neat. Beyond them, on the same side, are three substantial stables in a row, down the centre of which runs a wide corridor, with stalls on each side. The total length of the stables and of the cattle sheds on this side is about 900 feet. The south side, and part of the north side, is occupied by box stables (11) for stud horses, 94 in all. Passing by these we arrive at a second row of cattle sheds of the same size as those on the eastern side, twenty in all. Northward from these are two double rows of stalls (6 and 7), containing 38 compartments, which have been erected for the present Exhibition. West of these again, and running from the south, northward along the boundary fence, are 132 double pig stalls (8), having a total length of 390 feet, by 16 feet in width. On the north side are three other long buildings. The first and largest (5), 400 feet long, by 16 feet wide, contains 100 covered sheep pens; the second (4), 200 feet long, by 16 feet wide, contains 50 pens, also for sheep; the third is a shed 156 feet long by 24 wide, devoted to carriages, heavy machinery and the like. East of these again are the poultry pens. The shed is 108 feet long by 18 feet wide, and contains 192 coops, 96 on each side. Besides all these, a hay barn has been provided in a very convenient situation. On the north of the Palace, between it and the horse ring, a large tent was erected, where, under the superintendence of Mr. James Fleming, the roots and vegetables were arranged for exhibition.

The "Crystal Palace" stands at the northern extremity of the grounds, and presents a very effective appearance. Its primary form is that of a Greek cross, but the ground plan takes the shape of an octagon, four sides of which are made by the sides of the cross, and the other four sides by walls connecting its extreme points. The building is two stories in height, the upper story preserving the cross form, and giving to the gallery four distinct compartments, corresponding to the four sections of the cross. Its extreme length is 171 feet and its width the same. The ground area comprises a space of 36,000 feet. The first story is 16 feet in height, and the second 16 feet to the line of the eaves. In the centre, at the intersection of the cross, is an octagonal space 76 feet in diameter, and having a height of 54 feet to the roof, which is surmounted by a cupola and dome. The interior of the building has been thoroughly repainted and otherwise decorated. The galleries are each 54 feet wide by 64 feet in length, and are connected one with the other by a balustrade running

round the centre octagon. The triangular spaces formed by the lines drawn from the extremities of the arms of the cross to complete the octagon of the ground floor, are one story in height, and covered with flat tin roofs. The architect of the building was Mr. A. H. Hill, of Hamilton; its original cost was about \$15,000.

#### HORSES.

The examination by the Judges of the horses exhibited, commenced about nine o'clock on Wednesday morning, and proceeded slowly. Very great interest was taken in it by the visitors to the Exhibition, who surrounded the horse-ring in large numbers, and freely expressed their admiration of the many beautiful animals brought out from the stables.

In some respects the Canadian farmer is at a disadvantage when compared with his British brother. In England the farmer generally has two sets of horses. The one he keeps for working the land and for drawing loads. They are heavy animals, of enormous strength, but slow in pace. This sort also takes the heavier produce—the grain, hay and potatoes—to market. For drawing gigs, light waggons, and dog carts, a different variety is provided; far more slightly built, and capable of trotting along at a good round pace. But from various causes the Canadian farmer generally uses only one style of horse. The roads require a stronger animal than the light English road horse; while the heavy draught beast would be altogether too slow. From this cause, and from economical considerations, a medium horse is preferred in Canada, which can take either the road or the field. In this way a horse of an almost distinct character is got, capable of farm work, good on the road, and suitable for the country, but which will stand comparison neither with the heavy draught horse of England nor the gig horse. The circumstances just stated render it difficult to classify the horses actually exhibited, many being both "agricultural horses" and "road horses."

Of stallions for agricultural purposes there were but fifteen entries, a small representation of the class, so far as the number is concerned, but there were some splendid animals among them. Among the best were those exhibited by John Summersfelt, of Markham, and Thomas Teasdale, of Chinguacousy. "Waxwork," belonging to Robert Stevens, of Streetsville, is a noble animal, possessing great breadth of chest and beauty of action. "Young Exhibition," owned by Thomas Goldring, of Sarnia, 8 years old—has been successful at several Exhibitions. He is large and proportioned well. "Golden Hero," a nine-years old stallion, owned by Mr. John Brydon, Township of King, has a strong dash of Cleveland blood in him.

"John Long," a stallion 8 years old, is a smaller animal than either of the others mentioned. He is marked strongly with the characteristics of the Suffolk Punch, finely formed limbs, short, arched neck, short back, and great shoulder power, but without an angle to be seen. His colour is light chestnut. He is owned by Mr. Patrick Murphy, of Guelph.

There were only fifteen entries of blood horses, and they are exhibited by Mr. White, of Bronte, Mr. Shedden, of Toronto, Mr. Ackland, of Oshawa, and Mr. Dew, of York Township.

Mr. Ackland's horse "Kenneth" is a splendid animal, bay in colour, with beautiful action, rather lightly built, but very strong. His sire was imported from Kentucky some years ago. Mr. White showed "Touchstone," bred by himself from imported stock.

Mr. Simon Beaty exhibited an excellent heavy draught stallion of the Clydesdale breed, imported from Lanarkshire; and also a grey stallion, imported from England last fall, by Mr. Copeland, of Cobourg, who deserves very favourable mention. A three-years old heavy draught stallion, showed by Mr. Harvey of Beverley, is an animal of much promise. Mr. John Shedden, of Toronto, shows a very fine iron-grey mare, of graceful build, well suited to serve as a single carriage horse, among which she is classed.

Among the saddle horses, one belonging to Mr. Hendrie, named "Doncaster," is perhaps as good an animal of the kind as is to be found in Canada. Mr. Smith, veterinary surgeon, of Toronto, also exhibited a very fine horse of the same class.

Mr. John Shedden, of Toronto, showed a capital span of heavy draught horses, got by an imported English horse, "Sir William Wallace." They are splendid animals, of a very large size, well made, and manifestly of great strength. They are not so heavy as the English draught horse or the Clydesdale, but there are few, if any, in Canada that come up to them. They were walked round the ground attached to a large waggon, their harness decorated with polished brass ornaments, and attracted many admirers.

There were 29 entries of road and carriage stallions. The quality of the whole is very good. "Black Hawk," belonging to Mr. Davis, of Thornhill, and "Young Grey Eagle," to Mr. Daines, of Whitby,

are beautiful animals. Mr. Lindsay, of Woodstock, showed a fine pair of matched carriage horses, got by thorough-bred stallions. These are necessarily but meagre notes of an exhibition of horses embracing over 400 animals of various ages.

#### CATTLE.

The display of cattle was the leading feature of the Exhibition. It was indeed a magnificent collection of animals. Competent judges were unanimously of the opinion, that so fine an assortment of neat stock had never before been got together on this continent. A general sentiment of pride and pleasure filled all minds in relation to this part of the show. In Durham, according to general expectation, the animals newly imported by Hon. D. Christie, appropriated a large share of the honours. We have no fault to find with this, believing that special encouragement should be given to enterprise and spirit in this direction. At the same time, we doubt not there were other animals on the ground intrinsically their equals, though not "made up" with the same artistic skill. Mr. Christie's new importations were, and most likely always have been in high condition, too fat indeed for ordinary purposes, and after seeing them we are not surprised that the *Mark Lane Express* and other British journals, should exclaim so loudly against over-feeding by old-country breeders. Our Board of Agriculture, in February last, resolved, "That in future, judges of stock be instructed to exclude from competition breeding animals which have been over-fed for Exhibition purposes." Having the fear of this rule before their eyes, our breeders have, with scarcely an exception, abstained from over-feeding the present season, and in some cases, have well nigh gone to the opposite extreme. The rule just quoted is in our view a just one, and we hope exceptions to it will not be used as precedents. The first prize bull of any age was a yearling, owned by Messrs. J. & J. White, of Milton. He also took the first prize in the yearling class. His sire is "Oxford Lad," owned by Messrs. D. Christie and J. Cowan, and took the first prize in the four year-old class. Both sire and son are splendid animals. We forbear further particulars in regard to them, and also omit reference to the prize cows and heifers, as we shall probably give portraits of the best among them ere long, and will then supply a more detailed account than we can possibly do now. The Devons were in nearly as full force as the Durhams. Messrs. J. Pincombe, of London; D. Tye, of Wilmot; and S. Peters, of London, are the chief exhibitors in this class. The Galloways also formed a striking feature in the cattle show. J. Snell, of Edmonton took the first prize in four year old bulls, and bulls of any age. He also took the prize for the best cow. Mr. Snell's herd of Galloways is certainly a very fine one. Other breeders are paying attention to this variety, and it is evidently growing in public favour. In Herefords, Mr. Stone, of Guelph, was almost "alone in his glory," and made a clean sweep of the prize list. The show of Ayrshires was not extraordinary; W. H. Essey, of London township, Col. Denison, of Toronto, P. R. Wright, of Cobourg, J. P. Wheeler, of Scarborough, and Col. E. W. Thomson, of Toronto, were the chief exhibitors in this class. There was a fair show of grade cattle. The Fergus Cup, a prize given by Hon. A. J. Ferguson Blair, for the best grade two year old heifer, was won by W. Miller, junr., of Pickering. Thos. Stock, of West Flamboro', W. Miller, junr., of Pickering, and John Smith of West Flamboro', were the leading prize-takers for grades. The show of fat cattle was not large, but there was a good display of working oxen. Want of space precludes a longer account of the neat stock exhibited, and we shall in all probability take up the subject again in a future issue.

#### SHEEP.

Next to the cattle the sheep formed the most prominent and interesting part of the Exhibition. Over 700 entries were made in this class, and of that large number more than one-third were Leicester. The South Downs were largely in the field. Scarcely less numerous were the Cotswolds, and next to them the Spanish and French Merinoes. Other breeds, e.g., the Shropshire Downs, Oxford and Hampshire Downs, Cheviots, &c., were well represented, and there were also a number of grade sheep. Messrs. White, Snell, and Jackson were the leading competitors in the Leicester class. Messrs. Stone and Bethell nearly carried all before them in the South Downs; and Messrs. Stone, Snell, and Miller took most of the Cotswold honours. A ram of Mr. Stone's, weighing over 400 lbs., was greatly admired. In Shropshire Downs, Mr. Geo. Miller, of Markham, distanced all competitors; his Hampshire Downs were also much commended by all capable of judging. In Cheviots, David Elliot, of Grafton, W. O'Guy, of Oshawa, and George Miller, of Markham, took all the prizes. The show of Merinoes was not particularly good. There were no really first-class

animals among them. As a novelty, we may mention some Negrete Merinoes recently brought from Prussia, which were exhibited by Mr. J. Homeyer, of Brockville. The most attractive portion of the sheep show consisted of Mr. George Miller's recently imported animals, of which he had about forty on the ground. We have but briefly alluded to the sheep, intending hereafter to notice them further, and probably to give engravings of some among them.

## PIGS.

The porcine display, though better considerably than last year at Kingston, was not so good as we remember to have seen it on some former occasions. Certainly it is quite inferior to what it was four years ago. We miss the names of some well-known and eminent competitors in this department, such as Penton of Paris, Tye of Wilnot, and others who might be mentioned. The deficiency this year was chiefly in the Berkshire class, which was not so largely or so well represented as that justly-prized breed deserves to be. The Suffolk also had but few representatives. Some improvement needs to be made in the prize-list, so as to prevent the miscellaneous classification in "other large breeds" and "other small breeds," which must strike every observant spectator who knows the difference between a Yorkshire and a Suffolk. We have no "mammoth hogs" in the show of the present year, and they can be well dispensed with. There were some fine animals of the Yorkshire breed, both large and small, especially the former. As usual, C. A. Jordan of Wallbridge, had some good specimens, though fewer than usual. H. Thomas, of Brantford, showed a good boar and sow, over one year old, and Joseph Alton, of Nelson, a large, long, fine one-year-old. Jas Ford, of Trafalgar, had a nice boar—an excellent specimen of the Yorkshire family. Samuel H. Reeves, of Derry West, J. P. Wheeler, of Scarborough, J. Mair, of Boyne, and N. Bethell, of Grantham, had some fine young animals from 4 to 5 months old. Among the indefinite "large breeds" were two sows, one owned by Wheeler, of Scarborough, and the other by Bethell, of Grantham, which are deserving of special mention. Peter Grant, of Hamilton, also had a large sow of good quality. J. McGlashan, of Pelham, showed a large boar that is well-bred. In Berkshires, there were some good specimens contributed from the yards of Alex. Thompson, Morton, S. Baker, Simcoe; Cols Thomson and Denison; Thos. Dunbar, of Ancaster, and G. Davis, of Wellington Square, showed some worthy of praise. In improved Berkshires, George Roach, of Hamilton, exhibited a good pair, one only ten months old, the other over one year. Hugh Dempsey, of Downie, had a very pretty three months old boar of this class, and A. Gorrie, of Dundas, showed a pair of like age. As an intermediate family between the large and small breeds, we were glad to see some Chester county whites. This variety originated in Chester county Pennsylvania, and has become very popular in many parts of the United States. Some of them are coarse, but the better specimens are fine-grained, silky-haired nice creatures. George Roach, of Hamilton, was the chief exhibitor of Chesters. A pair ten months old attracted some attention, and a sow, one year old much more. This fine animal had two of her pigs, six months old, by her side, which show much promise. W. Henry, of Rockton, exhibited a pair of this breed, over one year old. The boar was coarse, but the sow fine. Peter Grant, of Hamilton, also showed a pair of Chesters both fine and good; the boar especially so. We think this breed of pigs will prove a decided acquisition. In Suffolks, D. M. Kenny of Milton, showed a very handsome boar, whose only defect was excessive fat. J. Zimmerman, of Nelson, had a Suffolk boar also. J. Main, of Boyne exhibited a good pair five months old, of the small breed. There were some first-rate Essex hogs to be seen. James Vine, of St. Catharines; T. McCrae, of Guelph; W. A. Cooley, of Ancaster; and J. Cowan, M.P.P., of Waterloo, were the chief exhibitors in this deserving class, the only objection to which is its colour; and that is a mere matter of taste, if not of prejudice.

## POULTRY.

The show of poultry, as a whole, was but moderately good. Still there were some specimens that were first-rate. The Aylesbury ducks, shown by Messrs. Peters and Bogue, of London, might almost challenge the world to beat them. They certainly would not bring disgrace upon their owners, at the best poultry shows in Britain. The large, white and Bremen geese were also excellent. A fair but not extraordinary representation of white and grey Dorkings was on the ground. Of Hamburgs, golden silver, and spangled, there was a very fair collection. The black Spanish fowl on hand were pretty good but Canadian breeders have before now produced better. One good cock, the best unquestionably on the ground, had the disfigurement of a frozen comb a true bill against his owner for neglect. Of Poland

there were but few, the blacks quite ordinary, but Mr. Peters' golden and Mr. Bogue's silver Poland's were good. The show of game fowl was decidedly fine. In Seabright bantams the Exhibition was inferior. The Cochins had scarcely a representative. There was not a buff Cochin good, bad, or indifferent on the ground. A very few ordinary Brahmas only, made their appearance. Some fair Rouen and Muscovy ducks were exhibited by W. Cowing, of Grantham, and others. Large English ducks were exhibited by G. Peters and J. Bogue, of London. White and coloured turkeys were shown by the last named parties, and by J. Kerr, of Stamford. A splendid pair of wild turkeys was exhibited by Mr. Peters, of London. John Cullis, of Cranborne, took the first prize for white geese, and John Biggar, of Flamboro', carried off the same honour for coloured geese. S. Peters had a fine pair of Chinese geese. Messrs. McDonald and Riddell, of Hamilton, exhibited collections of pigeons, in which were some beautiful specimens. Two varieties of carriers were especially admired.

## IMPLEMENTS.

It is pleasing to notice the progress made in the manufacture of agricultural implements. Year by year both the number and excellence of those exhibited increase. Many improvements are made in their construction, the results of the thought of Canadian makers, whilst great quickness is also manifested in the appropriation of American ideas. Our farmers can now purchase from manufacturers in this Province implements as good and as cheap as he can get anywhere in the world.

Commencing with the machines for sawing wood, we meet first with one shown by Hon. E. Leonard, of London, C. W. It is light, very easily carried from farm to farm, and capable of cutting ten cords of wood per hour, with the use of four horses. Its price is \$70.

Messrs. J. & S. Noxon, of Ingersoll, also had a sawing machine, the iron work of which is very nicely finished. It will cut eighty or ninety cords of wood per day, by the aid of four horses. The price asked is \$60.

The "crack" thresher and separator upon the ground was that made by Mr. J. Hall, of Oshawa. It is beautifully finished in all particulars. A great part of the wood work is of maple stained, varied in places with dark walnut. The iron work is all highly polished, and every screw-head in it filed as true as in a Great Western locomotive. It has a number of improvements in it, but in principle it appears to be the same as those generally in use. There is considerable difference of opinion between makers respecting the merits of belting and gearing—the tendency is apparently in favour of the latter. In Mr. Hall's machine very little leather is employed. The farmers gathered around it in large numbers, and were united in their expressions of admiration. An arrangement for saving the chaff after the grain had been winnowed gave great satisfaction. The machine has attached to it a ten-horse Pitt's power, and is capable of threshing 500 bushels a day.

L. & P. Sawyer of Hamilton, showed a well finished thrashing machine.

Mr. John Watson, of Ayr, had one of a similar description.

Messrs. F. G. Beckett & Co showed three steam engines. The first is a portable engine for farming work. It has an eight inch cylinder with a ten inch stroke, and at 120 revolutions per minute will do the work of eight horses. Its distinguishing feature consists in this, that the engine work is all bolted to the boiler, and rests upon it without the intervention of a frame. The object in so making it is the reduction of weight. The one in question weighs only 3,500 lbs., and may readily be drawn by a couple of horses. The only doubt about it is, that going over rough ground the screws which fasten on the machinery to the boiler may become loosened. But purchasers from Messrs. Beckett have their choice. They can either buy this engine or another in which the machinery is placed upon a frame, but which weighs about 5,000 lbs. The difference is not, however, caused altogether by the arrangement noticed. To its credit must be placed that which is owing to a fire-box of more than the ordinary length, in order to permit of the use of wood of the regular length, thus saving the trouble and expense of sawing. Neither of these engines, if kept in good condition, will consume more than two and a half cords of wood per week. The price is \$360.

A stationary horizontal engine was shown by the same firm. With 45 pounds of steam on the boiler it will work up to 13 horse power. The cylinder is nine inches in diameter with a thirteen inch stroke. The price is \$900 boiler and all complete. The work on all the engines appears to be of a most trustworthy description. Great care has been exercised in getting everything reliable, so that the parts may

all wear well. The engines made by this firm are favourably known throughout the Province.

C. H. Waterous & Co., of Brantford, also exhibited a stationary engine, in full working order.

There is, of course, a large display of mowing machines. Little can be said of their merits from merely looking at them. The real test was applied when a few months ago they were out in the field competing with one another. We noticed a Ball's Ohio, presented by Mr. Joseph Hall, of Oshawa, to the Society, for presentation in turn to the successful competitor at the ploughing match. Mr. Hall might have sent a machine of ordinary finish, and have been thought liberal enough, but instead of that he has given one made in splendid style, polished and painted until it is a perfect swell among machines. In every respect it has been beautifully made.

The report of the Judges on mowers and reapers, which we give in full elsewhere, obviates the necessity for lengthened remark in referring to this important class of implements. We may, however, just specify one or two novelties.

Mr. J. Collins, Guelph, showed a self-delivering reaper, in which he aims to dispense with the presence of a living raker. For this purpose, instead of making the floor of the machine of board, he forms it of an endless chain of wooden strips, which pass round a couple of rollers. The chain of strips moves as the machine moves, and deposits the cut wheat on the floor as it progresses. The invention seems ingenious, but wants a trial to prove its success.

Mr. J. Bingham, Brantford, showed another self-raker, which he calls "Young Canadian." It would doubtless do its work well, but the heavy manner in which it drops the rake on the floor of the machine is an objection which perhaps a little ingenuity might obviate.

We next come to the grain-drills. Mr. John Soules, of Markham, showed one which makes the drill by means of rollers, and also sows the grain. An arrangement for sowing grass is attached to this drill.

Messrs. Maxwell & Whitelaw, of Paris, showed a well-made drill with ten spouts. Mr. J. Watson showed another not quite so large. Messrs. Billington & Forsyth are in the same line of business.

Mr. S. Day, of Brantford, showed a horse hay rake. The teeth, sixteen in number, are made of spring steel; the width covered by the rake is nine feet. The machine is constructed on a principle very generally adopted on the other side, it being beyond all doubt a great improvement over the old revolving rake.

Mr. Hugh McLaren, Messrs. J. Scott & Co., and Mr. J. Thomas, Hamilton, each showed a stump extractor. They are all worked by screw. The machine shown by the last mentioned manufacturer is an exceedingly powerful one, and is mounted on immense wooden wheels.

Mr. C. Rocky, of Salem, showed a lot of ingeniously constructed hand seed drills. Mr. John Watson, Ayr, Mr. Charles Lemain, Hamilton, and Messrs. W. & C. Walker, Brantford, are manufacturers in the same line of business. The show made by each is very creditable.

Messrs. W. Mahaffy, Brantford, and George Bryce, Mohawk, each showed a pair of iron harrows with curved irons. Mr. Bruce, of Guelph, showed one with a wooden frame.

Mr. Rundell, of Chicago, exhibited a horse pitch-fork. It is a simple but ingenious contrivance, by which a large fork suspended from the roof of a barn, or from a pole over a rick, carries up a load, empties it, and then descends. Mr. George Inglis, of Eden Mills, showed a long handled horse hay fork, which appears to work equally well. We commend both to the farmers as labour saving machines, by the use of which they may greatly benefit.

The assortment of ploughs is a large and varied one, and furnishes evidence of the great progress which has been made in the improvement and perfection of the farmer's most essential tool. Some twenty five or thirty of the ploughs were being tested by the judges outside the Exhibition grounds at the time of our inspection of the implements, and hence we did not obtain particulars as to their several makers and characteristics. We observed three samples of the double shear, or double Michigan plough, sometimes called by mistake a subsoil plough, exhibited by R. Hill, of Port Hope, J. Watson, Ayr, and W. A. Cooley, of Ancaster, as agent for Wiard Bros., of Careyville, N. Y. This is an implement which deserves to be better known by our farmers. A very nice double mould-board plough, with marker attached, for making turnip drills, was shown by George Morley, of Thorold. Two styles of subsoil plough are exhibited, both made of iron, and pretty heavy. One is made by George Morley, of Thorold, and consists of a single square share, kept in place by three wheels. It has rather a clumsy look, and is not apparently calculated to "rip and tear" quite enough in the subsoil. Another was shown by Geo Bryce, of Mohawk, which would make more

stir among the clods and roots, but we fear the draft is heavy. Iron ploughs of the ordinary shape were exhibited by Fletcher of Beverley, Mahaffy, of Brampton, Alexander, of Belleville, and others.

There was a very good variety of cultivators, both double and single. A. C. Bruce, of Guelph, showed an effective one for two horses. Eakin & Cash, of Markham, had one on an oscillating principle which is of very superior workmanship. J. Scott & Co., of Dundas exhibited two styles one furnished with a seat. T. & J. Morgan, of Markham, showed a combined grubber and cultivator by taking off the shovel-teeth you have a set of grubbers; this implement is admirably made and beautifully finished. J. & S. Noxon, of Ingersoll also had an excellent two-horse cultivator. So also had J. Grindley, of Fergus & Co.; we especially like the way the teeth of this implement are braced. T. Webster, of Berlin, showed a revolving cultivator, and F. J. Payne, of Southwold, a cheap cultivator that yet looks as though it might do effective service. I. Westcott had an all-iron cultivator, with rear handles like those of a plough. One-horse cultivators were pretty numerous also. J. Norrish, of Eden Mills. A. Harris & Co., of Beamsville, George Bryce, of Mohawk, Thos. Muirhead, of Paris, and T. Westcott, exhibited these. Some of them are very light, and yet effective soil-stirrers.

Rollers for rolling the land were shown by three manufacturers. We should give the preference to a double roller, one in advance of the other, made by Eakin & Cash, of Markham. It leaves no ground untouched, works well, turns easily, and is in our view an excellent style of clod-breaker and surface-smoother. There is no very varied assortment of straw-cutters, most of them being made on the wheel-knife principle. An excellent one for horse or hand-power was shown by J. Watson, of Ayr. Maxwell & Whitelaw, of Paris, showed a very excellent one to go by horse-power. McLaren, of Lowville, Sawyer, of Hamilton, and others had straw-cutters on the ground. James Bully, of Windsor, showed a combined straw and root-cutter. D. Darvill, of London, showed another—and in our view a better one. Turnip-slicers of various kinds were to be seen. The choking of cattle with uncut roots is now an offence against humanity, for which there is no excuse. Watson, of Ayr, McLaren, of Lowville, and Maxwell & Whitelaw, of Paris, competed in this article. Implements for the dairy were not lacking. J. Amor & Sons, of Hamilton, showed a curd-mill, which seems to work well. They had also two styles of cheese-presses. F. S. Clement, of Cobourg, had another style of cheese press. Two kinds of cheese-vats were on exhibition—the "Union Dairyman," made by O. Neill & Co., of Utica, N. Y., and "Ralph's Oneida Vat." These are intended for cheese-makers on a large scale. We give the preference to Ralph's vat, and think this is the general opinion among experienced dairymen. Fanning Mills were almost non est. Only two competitors exhibited these, Scott & Co., of Dundas, and Wilson of Richmond Hill. In the mill made by Wilson the screens work across the mill, instead of lengthwise.

A few styles of fencing were shown. W. & T. Walker, of Brampton, had some wire fence, intended for garden fence, which is very neat and pretty. The irrepressible S. Hall, of this city, was on hand as usual with his "portable straight fence," which is by no means to be despised. H. Lutz, of Saltfleet, showed another style of portable field fence, which was of simple construction. Yet another was shown by J. B. Graery, of Weston. R. Lewis, of Melbourne, had a section of ornamental fence with a pair of roller gates, which have a tasteful appearance, and work very satisfactorily. He had also commoner fencing for ordinary uses. S. Washburn, of St. George, had a model of a nice portable sheep-fence. Macfarlane Brothers, of Etobicoke, exhibited a very ingeniously contrived self-acting gate, by the help of which the waggon or carriage acts as porter, and you are saved the expense of a gate-keeper and the trouble of dismounting. If it only works on the road as well as it did on the Exhibition ground, it will prove a great convenience. Cider mills and presses were exhibited by A. Harris & Son, Beamsville, N. M. Samson, of St. Catharines, Palmer & Groat of Grimsby, and J. Scott & Co. of Dundas. The latter exhibited two, a small iron hand-mill, and a large mill of wood and iron combined. The show of churns was small. Condon Lewis, of Durham, had one which is worked by an ingenious plan of driving the common dash by means of a windlass. A. O. Dell, of Bowmanville, had one which agitates the cream with a horizontal revolving dash. Edward Lawson, of this city, had a double-dash rotary churn. Only one washing-machine and one clothes-wringer attracted our notice. If there were others we failed to see them. H. A. Coombs of Stoney Creek, and W. H. Childs & Co. of Hamilton, were the exhibitors. Isaac Moyer, of Clinton, had a very noisy but apparently effective meat chopper, consisting of three hatchets, which work with great regularity and force. They would soon make sausage-meat of an unlucky dog, cat, or

poroker. Lawn-mowers, from the manufactory of A. Shanks & Son, Arbroath, Scotland, were shown, we presume, by J. Fleming & Co. J. Norrish, of Eden Mills, exhibited some nice ox-yokes. Grain cradles, both common and muley, were to be seen. The chief makers are Baker, of Waterdown, Smale & Brock, of Lynden, and Howell, of Ancaster. But alas! "Othello's occupation's gone." The reaping machines have rendered grain-cradling obsolete. Thos. Bryson, Jr., of London, exhibited some well-made half-muley cradles, and a splendid lot of smaller implements, such as straw forks, hay rakes, scythe snathes, and thistle extractor. He had also a machine for harvesting pease, but of this we do not think much, believing a common scythe to be far better. A splendid assortment of scythes, hoes, and forks came from the manufactory of A. S. Whiting & Co., of Onawa, which we visited not long since, and after seeing the establishment, we are not surprised at the excellent work it has sent forth. We must not omit to mention a model of a potatoe-digger shown by W. W. Kitchen, of Grimsby. Success to it, for potatoe digging by hand is weary work! An assortment of drain tiles and tile bordering for gardens, was shown by E. Brown, of Nelson. W. Lindsay, of Newcastle, had a tile-making machine, which will make tiles of all sizes from two to eight inches in bore. It is driven by hand, requires two men to work it, and is capable, if properly managed, of turning out 10,000 tiles per day. Of course the clay must be previously ground. J. A. Laffer, of Albion, N. Y., showed a working model of a brick-making machine, which combines a clay-mill and a brick-mould, and will make either common or pressed brick, by changing the clod-crusher and moulds, which can be done in fifteen minutes. It will turn out 12,000 pressed brick, or 30,000 common brick, per day. C. Jones, of Bronte, had a clothes-drier on a new and simple principle, for which the ladies ought to be, and doubtless, will be, grateful: i. e. if they can coax their husbands and fathers to buy it for them. G. Huntington, of Norwich, showed a machine for "upsetting" iron, especially waggon-tire—which obviates the necessity of cutting and welding. Mair, Inglis & Co., of Guelph, had a shingle-maker, and machines for cutting and planing flour barrel-heads, which work almost magically.

Strange to say, bee-hives were not included in the prize list! This was undoubtedly an oversight, and is not likely to occur again. Happily, much interest is being awakened all over the country in bee-keeping, and we were glad to see Messrs. Thomas, of Brooklyn, and Scott, of Yorkville, on hand with their hives. Both are made on a similar principle, that of the "moveable-comb observing hive." These hives attracted a great deal of attention, especially those of Messrs. Thomas, from the fact that one of them was inhabited, and from time to time the proprietor showed the conveniences of the hive and the quietness of the bees, by opening and exposing the comb, frames, and busy workers. There would be a general rush into bee-keeping if people were not afraid of being stung. By taking certain little precautions this danger may be completely obviated, and the most absolute control maintained over the "little busy bee." The Messrs. Thomas demonstrated this to the satisfaction of all who witnessed their exhibition of hives and bees.

#### FLAX.

THE number of samples of flax exhibited was not so great as we should have liked to have seen, or as might have been reasonably anticipated, considering the increased attention which has been given to the subject of flax culture during the past year. The samples shown, however, are much superior to those at any previous Exhibition, and were examined with a great deal of interest, and with many enquiries as to the best modes of culture. Col. Mitchell, of Norval, carried the Canada Company's prize of \$24 for the best 112 lbs. of flax, scutched, and of Canadian growth. Mr. John Rea, of Yarmouth, county of Elgin, received the second prize of \$16, given by the Association. The samples shown by Messrs. Black & Forrester, St. Mary's, fell short of the required quantity, (412 lbs.) but were very meritorious, exhibiting the flax in its different stages—the raw state, steeped, and scutched, and had an extra prize awarded for them. Messrs. Black & Forrester have started a flax mill, and have made arrangements with farmers in their neighbourhood for having 800 acres put under this crop next season. Messrs. Perine & Co., of Waterloo, had no less than 2,000 acres under flax this year, and it is matter for regret that they did not bring samples to the Exhibition. The flax shown by Col. Mitchell was very fine, much better than that sent to the Provincial Fair last year. Mr. Rea's was also of excellent quality, and would have stood a fair chance of taking the first prize against the Norval sample, had it been as well handled after being pulled.

Much interest was taken in the samples of flax brought from Europe, by Mr. John A. Donaldson, a gentleman to whom, as our readers are aware, a great deal of credit is due for his zealous efforts to impress on the mind of the agricultural community the adaptability of this plant for culture in Canada. The object of exhibiting these samples was to show to what an extent the value of the article can be increased, when proper care is taken in its preparation. The value of European flax, properly prepared according to the most approved methods, runs as high as £175 a ton, while a specimen of flax, grown and scutched in Canada, and recently sent to Ireland by Mr. Donaldson, sold there for only £75 per ton. The difference in the modes of handling the product after it is grown, makes all this difference in value—a fact of which all interested would do well to make a note.

The first prize for the best bushel of flax-seed was awarded to Mr. John Clark, Chingacousy. Several farmers present at the Exhibition, who have been growing flax, stated that they had got as much as 16 bushels to the acre—a large yield. There is little doubt of a good market being found for all the flax-seed that can be produced. We are glad to learn that Messrs. Gooderham & Worts, of this city, have their mill for the manufacture of oil-cake and linseed oil almost ready to go into operation. Messrs. Elliot, Hunt & Co. are also opening an oil mill at Preston, as well as a flax-mill, and a manufactory for spinning and weaving the products of the mill. It is worthy of mention, also, that Mr. Walter Arnold, of St. Catharines, has now a factory in operation for cottonizing flax, using in this process not only the flax itself, but the tow separated from it in course of preparation. Capital to the amount of \$20,000 is already invested in this factory, and we hear with pleasure that a ready sale is being found for its products. No specimen of this cottonized flax is exhibited at the present Fair. Of hemp there were only two entries, and the samples shown were not sufficiently up to the mark to obtain prizes. Mr. H. Girouard, of Hamilton, got the first prize for the best bushel of hemp seed.

#### FRUIT.

The display of fruit this year was good, equalling, if not excelling, the show of any year since the Exhibition of 1860. The season of 1860 was remarkably good for fruit, the peaches especially were magnificent, and the show of fruit generally was very fine. This year the peaches in almost every section of Canada have been a total failure, and, with the exception of a few plates of very ordinary looking specimens, we missed them entirely from the present Exhibition. For other fruits the season has not been favourable. Winter's cold and summer's drouth have both been against them. Still, as we have said, the display was at least as good as any we have had since 1860. A display of apples and pears was made, which, considering the unfavourable circumstances under which they were grown, proves conclusively that crops of these fruits may be expected with tolerable certainty from year to year. The show of grapes was the largest we have ever had at any Provincial Fair, and of a quality which afforded very gratifying evidence that increasing attention is being paid to the culture of the vine, for which we are now finding out that the climate and soil of Canada are well adapted. The experience of our vine cultivators fully bears out the conclusion arrived at by a Committee of the House of Assembly last session, that, by proper open-air culture, a most abundant grape-harvest, of the best quality, could be gathered in Canada, and we trust that year by year the natural advantages of our country in this respect will be turned to increasing account. A more full and particular account of the fruit may be expected in our next issue.

#### FLOWERS.

The display of flowers was fair, although the season for holding the Show is too late to allow the horticulturist a fair opportunity of exhibiting the triumphs of his taste and skill. The fine collection of green-house plants, occupying a large portion of the central stand, and exhibited by Mr. Thomas Buchanan, Hamilton, who received the first prize for them, was much admired. The collection shown by Mr. Hirschfelder, of Toronto, which carried the 2nd prize, embraced also a number of very handsome plants.

#### GARDEN VEGETABLES, FIELD ROOTS, ETC.

The show of garden vegetables was rather small, but embraced very many superior samples. The show of field roots, with the exception of potatoes—of which there was a very large and creditable display—was limited in amount, and the samples were for the most part particularly remarkable for their excellence. We are loath to attribute the smallness of the display of roots to neglect of these important crops, and would rather account for it by the nature

of the past season, which was a very unfavourable one for this class of products.

#### MISCELLANEOUS.

Under this head we may briefly refer, first, to dairy products. D. Clarke, of Puslinch, and G. Stranger, of Nassagewawa, took the leading prizes for butter. As usual, Mr. H. Ranney, of Dereham, took the lead in cheese. J. Cowan, of Saltfleet, came next. H. R. Parsons took the first prize for Stillton cheese, and J. Harris, of Ingersoll, for pine-apple cheese. Excellent honey was exhibited by H. McKee, of Norwichville, D. Vandusen, of Grimsby, and others. B. Hymman, of Grafton, Mrs. Miller, of Norval, and others, showed some prime samples of maple sugar. Bacon and hams, beef, mutton, and mutton hams, were shown by John Campbell, of Hamilton. A sample of Chinese sugar cane syrup was exhibited by J. Easterbrook, East Flamboro', and Mrs. Lawry, of Hamilton, was sole competitor in bread. Many other objects of interest might be specified, did our space admit. Wagons and carriages of superior workmanship, saddlery and harness work, and the large realm of the fine arts, furnish ample scope for enlargement. But we have already transcended our limits, and can only add a brief

#### SUMMING UP.

The Provincial Exhibition which has just closed has, on the whole, fulfilled the promise of success with which it opened, and has been, in some respects, decidedly the best ever held in this Province. More complete arrangements, better accommodation, and an improved system of superintendence, have characterized this year's Exhibition, and very few complaints had occasion to be made. The officers of the Association deserve much praise for the satisfactory and efficient manner in which they managed things. They had no small difficulties to contend with, some of an unexpected local nature, but by prudent and prompt action all were overcome.

The provision made for strangers was more than usually complete, and we believe but little inconvenience was suffered. Just prior to the Exhibition, there was danger of the Royal Hotel, the largest and best in Hamilton, being closed by the Sheriff, but fortunately Messrs. Mugridge & Co. averted that calamity by purchasing the establishment at the eleventh hour. Their spirited preparations and unremitting attentions made a large multitude of guests very comfortable. Almost the only drawback to the Exhibition was the wet weather on Thursday. This must have seriously lessened the receipts. Still, on the whole, the pecuniary returns have been very fair. Even on Thursday, 7,500 quarter dollar tickets were sold, which with 4,500 on Friday, 2,000 on Tuesday, and 13,000 on Wednesday, brought up the total number of quarter dollar tickets for the four days to 27,000, realizing nearly \$7,000. In addition about 1,000 members' tickets were sold at \$1 each, besides as many more issued to local agricultural societies. The receipts of the Association during the present show have thus been very much better than at Kingston last year, though falling far short of the receipts at Toronto in 1862.

### Report of the Judges on Mowers and Reapers.

Ever since the mowing and reaping matches, which took place in July, and were fully reported in our columns, much curiosity has been felt to know the award of the judges in reference to the machines then submitted to the test of actual work. This award was, by the direction of "the powers that be," reserved until the Annual Exhibition should come off. Accordingly, it is now accessible to the public, and will, doubtless, be read with much interest, especially by competitors and their immediate friends. By comparing the conclusions arrived at by the judges with the opinions expressed in our columns, just after the occurrence of the matches, it will be seen that the views expressed by us are confirmed in almost every instance.

#### REPORT:

In presenting our report on the trial of mowers and reapers, we think we may fairly congratulate the Association on the success of the trial on this occasion. It is hardly twenty years since the first reaping machine was made in this Province, and now, at this trial, there were machines from twelve different makers, while several of the largest manufacturers of these machines have not sent any; and, further, that though there was considerable difference in the quality of the work done—it was all well done—the machines, as a whole, wrought well—no breaking down, no total failures. The utility to the farmer of

well-constructed reaping and mowing machines can scarcely be over-rated, as they assist him at the busiest season of the year, and in the most laborious work of the farm. By their aid he is enabled to perform various important agricultural operations, much more thoroughly and at the same time more speedily than he could formerly do by hand, thus rendering him in some measure independent of the uncertain supply of labour, which in some places is so difficult to procure.

We are well aware how difficult it is to form a fair estimate of the merits of the different machines, seen only when new from their shops, and tried, as they were on this occasion, under the most favourable circumstances, both as to the ground and the crops, for doing good work—we may safely infer that a machine that did not work well on this occasion could not be expected to do good work under any other circumstances.

In the class of single mowers there were seven entries. Only four of them made their appearance on the ground, when, after seeing the quality of the work done and the time taken to do it in, and their respective draughts tested, giving as careful consideration to the whole as time and circumstances admitted, we award the first prize to No. 4, the Ohio Junior, made by James Hall, Oshawa; the 2nd to No. 2, Hubbard's mower, made by Billington & Forsyth, Dundas, and the third to No. 1, Wood's mower, made by J. Watson, Ayr.

In the class of single reapers there were eight entries; six of these were tried on the ground. After seeing all the reapers cut twice round the field, all that the number of machines to be tried allowed us time to do, and having had them tested for their draught, and carefully examining the work done, as well as the construction of the machines, we award the first prize to No. 2, Ayr reaper, made by J. Watson, Ayr; the second to No. 3, made by Billington & Forsyth, Dundas; and the third to No. 4, Brinkerhoff's self-raker, made by James Hall, Oshawa.

In the class of Combined Reapers and Mowers, there were fifteen entries, twelve of which were tried as mowers, and ten as reapers. It was in deciding on the respective merits of this class that we experienced most difficulty, as, while one machine did very good work as a mower it was not so good as a reaper, or one that reaped very well was not so successful as a mower, and this difficulty was further increased by our finding some machines entered both as single reapers and as combined machines, and that other machines were not the identical ones that have been used at the former trial for mowers. After having seen them all cut twice round the field, and their draughts having been tested, and taking into consideration their qualities both as mowers and reapers, we award the first prize to No. 8, Ball's Ohio, made by L. & P. Sawyer, Hamilton; the second to No. 9, Ball's Ohio, made by James Hall, Oshawa; and the third to No. 12, Ball's Ohio, with a self-raking attachment, made by Palmer & Grant, Grimsby. We would further recommend No. 13, Excelsior, made by J. Scott & Co., Dundas. This machine has a very simple but ingenious invention for dropping the sheaves by a kind of spar platform, delivering the sheaves in very neat order directly behind the machine. Should this machine prove, on further trial, to be substantial, and the tilting platform be found to work as well in all ordinary cases as it did in the very favourable circumstances we saw it work in, it promises to be a very useful invention.

All the machines both as reapers and combined machines wrought with reels, and with the exception of the Excelsior just noticed, were all constructed to deliver their sheaves on one side, so as to allow the machine to go round again. Without the sheaves being bound up, though this in many cases is an advantage, yet the sheaves put off at the side are in general not near so nearly laid for binding as they are when put off directly behind the machine, though there was a great difference in the manner the sheaves were laid off, it seemed to depend more on the skill or strength of the raker than on any difference in the form of the machines. All the combined machines, with one exception, cut a much greater width of grain than grass.

In reference to the trial of the draughts of the several machines, we may state that less dependence was placed on them than otherwise would, from the fact that the dynamometer used on the second trial failed after several of the machines had been tested, and that the second one used evidently gave a very different measure of power; and further, we are bound to add some attempts at imposition were made at this part of the trial. Good bridles, strong lines, and well-fixed neck-yokes seemed to be trusted to as much as firm whiplashes. We would suggest that further and more continuous trials are required to test satisfactorily the exact relative draught of the several machines, and that at any future trial when being tested for their draught, all the different machines should be tried with the same driver, and the

same span of horses employed expressly for that purpose. Such trials will prove very useful both to farmers and to machine makers. The farmer sees the different machines at work, and chooses the one he thinks most suitable for his purpose, and makers seeing his machine at work sees any defects or weak points that may be in it, and has amendments and improvements suggested to him. Such trials, too, should impress on makers the necessity of seeing that there is a little more care in the making up of his machines, and seeing that every part is as perfect as possible before it leaves his shop. If this was attended to it would prove more satisfactory to their customers, and in the long run profitable to themselves.

### Grand Provincial Ploughing Match.

"The Grand Provincial Ploughing Match in connection with the Provincial Exhibition," took place on Tuesday last. The field selected for the match was situated on the farm of Mr. Hugh Morwick, lot No. 42, 3rd concession of the township of Ancaster, rather more than a mile south-west of the village of Ancaster, and nearly eight miles from Hamilton. It was the nearest site to the Exhibition which could be secured—taking the requirements of level ground, clean soil, &c., into account. The judges appointed were Capt. Shaw, of York county; Mr. John Renton, of Glandford; and Mr. Walter Riddel, of the township of Hamilton. The field, by the time the judges had arrived on it, presented a lively scene. For half a mile on either side of the road leading past it, was lined with carriages, light and heavy. An immense crowd of people had gathered—probably from two to three thousand; though much larger estimates of the numbers were made. The attendance included both sexes and all ages—though farmers and farmers' sons of course made up the bulk of the gathering. The "setting of the poles," or marking out of the "lands," had been nearly completed; the ploughmen had got themselves in readiness for commencing operations; and a few minutes after the judges had made their appearance sufficed to get the match started. The field contained about fifteen acres of fine level sod; the soil was a sandy loam, remarkably free from stones, and just the thing needed, except that it was, perhaps, a trifle too dry for the clean cutting which is essential to good ploughing. The quantity of ground to be ploughed by each was, as near as might be, one sixth of an acre, and consisted of turning one crown ridge and one open furrow—equalling in all a "land" of seven yards in width and rather more than twenty rods in length. The time allowed was two hours, being at the rate of an acre in twelve hours. Each ploughman was required to drive his horses himself, and was debarred from touching the furrows with his hands and from having any assistance save in the "setting of the poles." The ploughing was required to be at least six inches in depth, and not more than one inch of an "under cut" was allowed.

There had been seventy three entries for this match, fifty-three ploughmen presented themselves and joined in the competition. The competitors were from all parts of the country—some coming a long distance; though of course a large proportion was from Ancaster and adjoining townships. Among their teams were some fine stout farm horses, but there were also many teams which were certainly far from being superior animals. The ploughmen, taken altogether, were physically a fine lot of men. Among the ploughs used there were only three or four wooden ones. The iron ploughs were of different varieties; a few of them were provided with devices for clipping the sod on the edge of the furrow, in order that the grass might be more completely covered when the furrow was turned. Some did this by means of a chain attached, and others by means of a "clipping" coulter. Nearly all the ploughs were of Canadian manufacture.

The work began at twenty minutes to one o'clock. The arrangement was that after doing six furrows, the ploughmen should report themselves to the Secretary, and have their time noted. A resting spell was then allowed until twenty-seven minutes to two o'clock, after which work was resumed and the "lands" finished—the time being again noted. Owing to misunderstandings and other causes, this rule was not very strictly observed, and some confusion was the result.

During the progress of the work the keenest interest was manifested in it. The immense crowd of

spectators moved continually around" the field and through the centre of it, examining and criticising the work. Each ploughman had a few admirers who would insist upon travelling alongside of him—advising him with the best possible intentions, though often to his material disadvantage. Some of the competitors bearing in mind that they had so much work to do in two hours, pushed ahead as if that were the sole consideration in the match. Others proceeded more cautiously, watching, almost nervously, every sod they turned to see that they made good work. There was some capital ploughing done. Here and there a ploughman would cut his furrows straight, "pack" them finely, and cover almost every blade of grass. But this last achievement seemed the most difficult. There were some who neither succeeded well in "packing" nor in "covering," but a good many who succeeded well in the former failed to come fully up to the mark in the latter respect. The practical men who had come there to see excellent ploughing, and to be satisfied with nothing else, were not slow to detect any shortcomings of either kind, and many a poor fellow who was making work that anywhere else would have been passed as good, was most unfavorably criticised.

The average time made was not quick. The record made of it would indicate that only one-fourth of the whole completed the task within two hours. This record, however, was not very accurate. The confusion in reference to the "resting spell" allowed after the completion of the first six furrows formed one source of inaccuracy. The Association had not provided the Secretary of the Match with any shed or stand to serve him as an office, and it was sometimes difficult to find him—a circumstance which doubtless led to other inaccuracies.

The judges moved about vigorously during the afternoon, examining the work of the candidates, and by the time the ploughing was completed, were apparently pretty well prepared to make their report to the Secretary of the Association. Soon after their return to Exhibition headquarters, the following award was made public:—

- FIRST PRIZE.—For the best ploughing, according to the rules of the Association. Prize presented by Mr Joseph Hall, of Oshawa—one of his Combined Ohio Reaping and Mowing Machines, with all the latest improvements, finished in superior style, Walter Hood, Ancaster, valued at.....\$150
- SECOND PRIZE.—For the next best ploughing, according to the rules, the Iron Plough which shall take the first prize at the Exhibition, Dougall McLean, York Mills, value, say.... 40
- THIRD PRIZE.—For the next best ploughing, the Wooden Plough which shall take the first prize at the Exhibition, Andrew Hood, Milligan, value, say..... 30
- FOURTH PRIZE.—For the next best ploughing, a set of Harrows, Ira Rymal, Barton, value, say..... 20
- HIGHLY RECOMMENDED.—Alexander Smith, Barton, (a lad of 17 years of age.)

The Secretary and Manager of the Match—upon whom devolved no small amount of work—was Mr. Jacob Rymal, of Ancaster. In one or two matters of detail the arrangements were a little defective. But, all things considered, the match was a great success—enthusiastic people on the ground pronounced it the best ever held in the Province. Such contests have a most beneficial influence. It is the opinion of old and well-informed agriculturists that the style of ploughing throughout the country has vastly improved since the introduction of these ploughing matches. A good effect is produced, not simply upon the actual competitor, but also upon the thousands of agriculturists who come to witness their work. It was a pleasing feature at the match in question to see so many farmers' sons—youths scarcely "out of their teens"—in the gathering. The interest manifested by them in the profession to which they are being bred, encourages the hope that when they come to be the farmers of the country our agricultural interests will not suffer in their hands.

### Report of the Judges on Grain.

The following is the report of the Judges in Class 31, comprising grains, field seeds, &c. :—

We, your Judges in Class 31, beg to report that we are well pleased with the arrangements of the various articles in this department, each section being so arranged that we could proceed from the one to the other in regular order.

We are deeply sensible of the importance of this department, and hence have proceeded with our work

with much care, and have endeavoured in all cases to arrive at our decisions and render our judgments according to just merit. It is quite impossible to render a just decision without due comparison. This we have been most careful in, using magnifying power where necessary in detecting defects. This we found most particularly essential in the lesser grains and seeds.

Notwithstanding the general cry of the failure of the wheat crop, we were pleased to find such a fair representation from various sections of the Province, and the samples being so extremely good, inclines us to think that the statements generally made of the failure of crops, have been somewhat exaggerated; the quality of the several lots are also very good.

In the competition of 25 bushels for the Canada Company's prize, we have seldom seen such fine lots, they being particularly free from any intermixture.

We consider a great improvement has been made by the Board in the new arrangement of classification in several of the sections, particularly in the spring wheat. Although several entries were made in the additional section for any other variety besides the two preceding, "Club" and "Fife," yet we did not deem it proper to award a premium, as we did not consider them distinct varieties from the two other sections, notwithstanding that they had various names attached to them, and in some instances the very identical wheats were shown in two sections. We cannot speak too strongly condemnatory of the practice carried out by many exhibitors, who know they are infringing the rules. We, however, lay the various samples before the Board for your inspection and consideration, and if deemed necessary, will award as the Board may determine. Your Judges did take upon themselves to open another class in "white field beans;" there was no section for the large kind, and we have awarded the same as in the small, thinking it had been omitted by mistake.

In the extra class, some of the articles could not be found, and others were so trivial in their nature that we did not deem them worthy of consideration. We have, however, recommended a prize for entry No. 2, "spring rye."

In conclusion, your Judges would take the liberty of suggesting to the Board to discontinue the method adopted this year of putting the names of the exhibitors upon the entry cards; unsuccessful competitors are apt to cast a slur upon the judges and attribute their decisions to favouritism.

E. A. McNAUGHTON,  
E. C. FISHER,  
ALEX. KERR,  
GEORGE WALKER,  
J. G. WORTS.

### The Flax Meeting.

A MEETING was held on Thursday at the Royal Hotel, Hamilton, with a view to the formation of an Association for the growth and cultivation of flax. Colonel Johnson occupied the chair, and Hugh C. Thomson acted as Secretary. The chairman having called the attention of the meeting to the object for which it had been convened, entered at some length into the importance of the cultivation of flax. The meeting was also addressed in practical speeches by Messrs. Donaldson, Ferguson, Denison, A. E. McNaughton, Hon. A. A. Burnham, Hon. H. Ruttan, and others, all of them dwelling upon the importance of the subject. A resolution was passed to the following effect, and the influence of the gentlemen present at the meeting, augurs well for the success of the movement.—"Resolved,—That this meeting, feeling it important that something should be done for the growth of flax, do memorialize the Agricultural Association and the Board of Agriculture to take into their consideration the propriety of joining in the formation of a Flax Association." A committee was appointed, consisting of Professor Buckland, Col. R. L. Denison, and Col. E. W. Thomson, who have been instructed to associate with themselves four other gentlemen from different parts of the Province, with the view of preparing a constitution for the proposed Association. Such a society, assisted in its earlier stages by the helping hand of the Agricultural Association, will prove, we doubt not, a very valuable institution.

### The Annual Meeting of the Provincial Agricultural Association.

THIS meeting was held as usual on the last day of the Exhibition, the President, Col. Johnson, in the chair. J. C. Rykert, Esq., of St. Catharines, was elected President of the Association for the ensuing year, Neil J. McGillivray, of Glengarry, First Vice-President, and J. P. Wheeler, Esq., of Scarboro', Second Vice-President. R. L. Denison, Esq., was re-elected Treasurer of the Association. On motion, London was unanimously chosen as the place for the next exhibition. Some discussion was then had in reference to the amended Agricultural Bill, and a resolution passed approving of it. The resolution of which the Council had given notice in THE CANADA FARMER and Journal of the Board of Arts, to the effect that the by-laws be amended, so that members, instead of receiving season tickets, should receive four single tickets, each admitting one person, was put and carried. Votes of thanks were passed to the retiring President, the railway and the steamboat companies, the Hamilton Local Committee, and Mayor and Corporation, for the manner in which they had aided the objects of the Association. The meeting then adjourned.

### The Retiring President's Address.

ON leaving office, Col. Johnson delivered a very able, and practical address, which we regret our inability to do more than briefly refer to in our present issue. In our next we hope to be able to publish, if not the whole of it, at least the more valuable portions.

### Opening of the Halton Agricultural Hall.

THE Agricultural Society of the County of Halton having erected a spacious hall in the town of Milton, for exhibition purposes, the building was formally opened on Friday 23rd ult., when a celebration of a very interesting character came off. A large and influential assemblage of the yeomanry of the county, with their wives and families, gathered together to do honour to the occasion. The exercises consisted of addresses, music and refreshments, and the liveliest interest appeared to be taken by all present in the various proceedings. The hall is a commodious frame building, ornamental in external appearance, and convenient as to internal arrangement. It is forty feet wide by eighty feet long. The posts are twenty-two feet high, giving ample room for a gallery which runs around the interior of the building. It is built on a plot of land eight acres in extent, which has been purchased by the Society as a permanent show-ground, and which it is intended to improve, ornament, and fit up as means may admit and occasion require. The agriculturists of this fine county have done themselves much credit by their praiseworthy energy in this matter, and the arrangements they have made for the convenience and efficiency of their fairs, cannot fail to have a most beneficial influence upon the farming interest in that region of country.

The proceedings of Friday last commenced about three o'clock in the afternoon, the hall being well filled, both above and below, with a highly respectable audience. Joshua Norrish, Esq., of Nassagaweya, President of the Society, occupied the chair. The Rev. Mr. Tremaine offered up a prayer for the Divine blessing on the occasion, and on the community at large.

Colonel E. W. Thomson was then called upon to deliver an address. He spoke but briefly, congratulating the assembly on the auspicious circumstances under which they had met, and on the evident signs of thrift and progress which were to be seen in the town and county. He also made some practical observations on the best modes of farm management, and concluded by expressing the hope that the new hall might be the scene of many pleasant and useful gatherings in time to come.

Professor Beckland was then introduced to the meeting. He commenced by referring to a visit he had made to the town of Milton some ten or twelve years ago, on the occasion of a County Fair. Even then there were many pleasing indications of the advanced and prosperous condition of the farmers in the County of Halton. There had, however, manifestly been great improvement since, and the erection of the hall they had met to open was a proof that the agriculturists of Halton were determined not to be in the background. The speaker then proceeded to give some of the results of his observations in a rather extended tour he had recently made in the United States. He spoke at some length of the Cheese Factory system, and its practical working in these localities where it had been introduced, and expressed the opinion that at least in some parts of Canada the adoption of this system would be found advantageous. There were difficulties connected with it, but cheese could be manufactured more cheaply, and of more uniformly good quality, on this plan than on the plan of private dairies. He then referred to the culture of hops, which was very largely carried on in some parts of the State of New York, especially in Otsego and Livingston counties. It had been found highly remunerative there and might be equally so in this country, especially now that the import duty had been taken off the article, and the British market was free to all the world. He would not commend this crop without a word of caution, especially to the inexperienced. It required some outlay, and if not properly managed, loss might be incurred. This season a new insect enemy to the hop had made its appearance, and given much trouble to those engaged in the culture of this plant. In conclusion the speaker alluded to the great resources, energy and progress observable across the lines. There was much to commend and imitate in that country, especially in the improved methods and appliances in use on the farm. There was also much to deplore, especially in connexion with the unhappy war now raging, and Canadians could not be too thankful for the blessing of peace, which he trusted might ere long be restored to the adjacent republic.

Mr. Clarke, Editor of THE CANADA FARMER, was the next speaker. He expressed his gratification at the opportunity of meeting so many of the agriculturists of the County of Halton, to whom he was not wholly a stranger. The kindly reception given him was doubtless attributable to his connection with THE FARMER, and it was but a sample of the general interest manifested by the farmers of Canada in that journal. Its present circulation was most encouraging, and there was every prospect of its being increased. For much of the pleasure and profit they derived from the perusal of THE FARMER, they were indebted to the able assistants who were associated with him in its management. Not the least interesting and useful feature in the paper had been the communications from practical farmers, many of whom had employed their pens very vigorously. This feature, it was to be hoped, would continue to be a prominent one. Let all feel themselves invited to contribute to the general good. Ideas and facts in whatever garb would always be welcome. Even fault-finding, if not unreasonable, would be hailed as one means of attaining the excellence and usefulness that were most earnestly desired. Sometimes criticisms had been made which were amusing on account of the misconceptions they betrayed. Thus, not long since, a correspondent who signed himself "Harry Home-spun, back in the bush," had complained that THE CANADA FARMER advocated too advanced and gentlemanly a style of farming, and the writer observed that he supposed the editor was an oily-haired, soft-handed city dandy, who had never heard the crash of a falling tree in his life, and would be frightened out of his senses were he to do so. The speaker knew something, however, by personal experience, of the toils of a farmer's life, having chopped, logged, and put in first crops with some of the pioneers in a western locality, and from a high appreciation of its importance, had always taken the deepest interest in all that pertained to the advancement of Canadian agriculture. Looking at the state of the farming interest in this country, many things presented themselves as desirable improvements. It was evident that agricultural industry must seek new channels, and as certain products which have been largely depended upon appeared to be failing, we must endeavour to supply their place. A system of rotation and a more varied style of farming were needed. Professor Beckland had suggested the trial of the cheese-factory plan of dairying, and already one or two of these establishments had been started in the County of Oxford. Others were in progress. He had just returned from the New York State Fair, where he met, among others, Mr. Ralph, the inventor of the Oneida Cheese Vat, who stated that he had sold several of his vats to parties in this country who had the establishment of cheese factories in view. The speaker then

spoke of the increased attention which was being given to flax, and commended the example of a neighbourhood in the eastern part of the Province, where the farmers had recently met to consider the flax question, and on a number pledging themselves to raise sufficient flax to keep a scutching mill in operation, parties at once engaged to erect one. Sheep-farming, the culture of fruit, and bee-keeping, were successively dwelt upon at some length, as deserving more attention on the part of the farmers of Canada than they were at present receiving. In conclusion, the importance of raising the agricultural calling by connecting more intelligence, scientific accuracy and judicious management with its operations, was strongly urged. Too many of the aspiring young men of our country allowed themselves to look down upon farming as a vocation unworthy their talents and energies. This was a mistake. No calling afforded better scope for mental ability, or a finer field for the educated man. Though the farmer might not have a great deal of leisure for reading and study amid the active labours of his vocation, he was quite as favourably situated in this respect as the professional and business men in our cities. Let our young men aspire to be educated farmers—they will thus elevate in public esteem a profession in itself a most noble one, and as they bring science more thoroughly into partnership with labour, farming will become less a drudgery, labour-saving implements will relieve the strain upon the muscles, and such enjoyment will be derived from that contemplation of nature, that sense of independence and those opportunities for reflection which are so characteristic of life on the farm.

On the conclusion of Mr. Clarke's address, a presentation ceremony took place. A handsome gold watch was presented to Mr. W. C. Beatty, as an acknowledgment of his efficient and valuable services as Secretary of the Halton Agricultural Society for several years past. An appropriate presentation address was read by Mr. J. McGiffin, and replied to in very becoming terms by Mr. Beatty. Tea and various other refreshments, abundantly provided by the ladies, were then passed round, and while enjoying them the assembly relaxed into sociality. Order being again called, several brief addresses were delivered by gentlemen residing in various parts of the county, and the meeting at length broke up, all concerned feeling that it had been a most agreeable, successful, and satisfactory festivity.

### The U. S. Pomological Society.

This Society held its biennial session at Rochester, N. Y., commencing on Tuesday, 13th of Sept., and continuing until a late hour on Thursday evening. There was a large attendance of the most distinguished Pomologists of America, among whom we noticed Mr. Chas. Downing, of Newburg, N. Y.; Mr. Hovey, of Boston; Mr. Buist, of Philadelphia; Dr. Warder, of Cincinnati, Ohio; Mr. Knox, of Pittsburgh, Penn.; Dr. Edwards, of St. Louis, Missouri; Mr. Parry, of Cinnaminson, New Jersey, and others. The entire delegation from the Fruit Growers' Society of Upper Canada were also present.

The first day was spent in hearing the experience of gentlemen from different places, with apples of different kinds, most of which were southern or western sorts not well adapted to Canadian culture.

On the morning of the second day, Dr. Trimble, of New Jersey, addressed the Society upon entomology, dwelling upon the importance of a more intimate acquaintance with the habits of insects, and to the fruit-grower especially of those insects which feed upon the fruits. He dwelt at some length upon the Codlin Moth, which infests our apples, and showed that by placing old cloths in the forks of the branches, or by twisting a straw rope a few times around the trunk of the trees, these moths would gather there to undergo their transformation, where they could be easily found and destroyed.

The Society then passed to the consideration of Grapes of different sorts. The Adirondac was found to be about as hardy as the Isabella, and a few days earlier than Hartford Prolific. The Creveling was a few days later than the Hartford Prolific, ripening between that and the Concord. The Union Village and Ontario were considered identical, and the Society voted unanimously to strike the name "Ontario" from the catalogue. It was thought to be about as good as the Isabella, and to require protection. Rebecca was sufficiently early for most parts of the New England States, and about as hardy as the Isabella. Maxitawny is too late for the climate of New York, but may do as far north as Philadelphia. The Iona is perfectly hardy, so far as tested, ripening

with the Delaware. The Isabella was reported by Dr. Grant to be perfectly hardy and earlier than the Hartford Prolific. Several of Rogers' Hybrids were introduced, and great variety of opinion seemed to exist as to their merits. Allen's Hybrid might be a very good grape for the amateur, growing with the Rebecca and Adirondac. The Cayahoga ripens with the Catawba.

The Society spent considerable time in a very interesting discussion upon the proper method of preparing the soil for planting grapes, and the best methods of planting, training and cultivating. We may give the substance of this discussion at another time.

Peaches, Raspberries, Strawberries, Cranberries, and Pears also received considerable attention, and we will close our notice of this interesting meeting by calling attention to the statement of Mr. Hovey, of Boston, that a gentleman of his acquaintance realized from ten acres of cranberries the sum of ten thousand dollars.

The Society adjourned to meet in the city of St. Louis, Missouri, in 1866.

UPPER CANADA FRUIT GROWERS' ASSOCIATION.—The next meeting of this Association will be held at the Town Hall, in the town of St. Catharines, on Wednesday, the 5th day of October, at 2 o'clock, p. m.

This will, undoubtedly, be a very interesting meeting. A fine display of fruit especially of grapes, may be expected; and much information will be imparted by the members regarding their success with different varieties, in different soils and localities.

AMERICAN STATE FAIRS.—Most of these have now been held, and notwithstanding the unfavourable circumstances created by the war, have proved very successful. We took the opportunity of attending the Ohio and New York Fairs, and were much pleased with the display of products. In a future issue we purpose giving the results of our observations so far as they are likely to be of interest to our readers.

THE UNION EXHIBITION.—We are pleased to learn that subscriptions being collected in order to provide prizes for exhibitors at the Union Exhibition, to be held in Toronto on the 5th and 6th proximo, are far more than it was expected they would have been when the committee undertook their labours. Seeing that this is the case, the committee have decided to give prizes to the amount of \$1,400 instead of \$900, as was at first proposed. Already about \$1,200 has been promised and with a little more liberality on the part of our citizens, the remaining sum required to make this a successful meeting will soon be secured. The West Riding of the county have withdrawn from the union, and hold their exhibition in Yorkville, the week following the Union Show in Toronto. Owing to the small amount at first at the disposal of the Committee, they had decided not to allow entries for live stock and farming implements, but since the acquisition of the increased funds, both these are now included in the prize list, with the exception of stallions and bulls. The exhibition will be held this year in the Crystal Palace, the same as last, and should the weather prove propitious there is every appearance of a large meeting. The following is the appropriation made out for \$1,400 to be distributed in prize money. Agricultural Department, \$540; Fine Arts, \$120; Manufactures, \$340; Horticulture, \$400. Subscriptions to the amount of \$600 have been taken up. The City Council granted \$300, and the Government grant amounts to \$300. Mr. Sheriff Jarvis has been elected permanent chairman, and Mr. Edwards, secretary and treasurer. Mr. Leslie, jun., assists Mr. Edwards in the duties of secretary. The committee and the officers are sparing no exertions which will render the annual exhibitions as perfect and successful as possible.

FALL EXHIBITIONS.—North Riding of Oxford, Woodstock, October 4th and 5th, open to all Canada; West Zorra Township, October 7th, limited.

The Fall Show of the Smith, Harvey, and North Douro Agricultural Society, takes place at Lakefield on Tuesday, the 4th day of October next.

The Annual Show of the County of Ontario, South Riding, Agricultural Society, will be held in Whitby, on the 5th and 6th October.

The Ninth Annual Exhibition of the Dummer and Douro Agricultural Society, will be held at the village of Warsaw, on Thursday the 13th day of October.

## Miscellaneous.

## Weather and Crops.

A "Canadian Farmer," writes from Derby, County Grey, Sept. 10th, 1864. "The harvest is now well nigh over in this locality, although there are still some 'patches' of late oats to cut. The weather, on the whole, has been very propitious for harvest operations. For about eight days the weather was rather broken, and did some little damage to cut grain; but, with this exception, it has been all that could be desired; and I think that, generally, grain has been housed in excellent condition.

"With regard to the yield, it will be fully equal to that of last year in the amount of grain, although not more than half the quantity of straw. The quality, too, is excellent—the average, I should say, judging from what I have seen threshed, will be from sixteen to eighteen bushels of spring wheat to the acre. Fall wheat will yield somewhere about twenty bushels per acre. Barley and oats will not yield quite as well in proportion.

"The week of wet weather in the middle of harvest has wrought wonders in the root crops. Potatoes and turnips are growing finely; and parties who, three weeks ago, despaired of having any of those valuable roots, now expect to realize a fair crop.

"The grain has not been infested with aphids this year, but there was a small white worm, similar to the pea grub, that did some damage to the wheat crop, but not to any serious extent, although some of our farmers, from having heard of the ravages of the midge in other places, thought at one time that their crop would be destroyed, and that they would not have bread, believing that this was the veritable midge; for, fortunately, we do not know by experience what the midge really is. Perhaps you could give us a short history of the midge, its habits, description, &c., which would be interesting to many of the readers of THE FARMER, and would save us from needless alarm in future."

NOTES FROM OXFORD CO.—"R. W. S." writes from East Zorra, Sept. 12, 1864:—"Conjecture as to the probable yield of grain has given place to the half-bushel test, and a fair estimate may be made as to the general average. As far as my own knowledge and reliable information extend, I may safely assert that the general average in wheat will, at least, equal that of last year; oats and barley a little less; peas also less. My own yield is—fall wheat, 18 bushels per acre; spring do., 12 bushels; barley, 20; oats, 20—all of which, I think, may be considered a full average of the township. I have heard of 40 bushels per acre of fall wheat, but have not seen higher than 25 bushels. Apples will be abundant and larger than expected; the late rains having swelled them out immensely. Roots may be good, but cannot possibly be large.

"Flax has been sown to a very large extent in this neighbourhood, one farmer having about thirty acres, and while the straw is almost as heavy as last year, the seed is not as good, and the yield of flax will be much below an average. This is becoming an important crop, and while the wheat is so infested with insect pests, it will be wise for farmers to turn their attention more fully to this branch of operations.

"FAILURE OF WHEAT AFTER TURNIPS.—Will some of your chemical correspondents tell us the reason why wheat almost invariably fails when succeeding root crops, especially turnips?

"L." writes from Hay, Huron Co., Sept. 21, 1864:—"The long drouth came to an end about the middle of August, and rain fell in abundance during the rest of the month, in fact the latter end of the harvest was rather catching, and although it scarcely got the length of injuring the crops of those who had patience and waited, yet a good many farmers, with that exaggeration of fear, so aptly illustrated in a late No. of THE CANADA FARMER, by the lawyer and his potato, hurried in their grain before it was fit. They are now finding a tough thresh; and some of them will find a dull market.

Harvest was well over, generally speaking, in this and adjoining townships, by the end of August; some two weeks earlier than usual. The next move was to the summer fallows, for fall wheat seeding. The ground was rather wet at the start, but by the 7th and 8th of this month, got in fine condition to receive the seed. Here and there, some are still sowing, but by the 14th it was generally over. There has been a

very large quantity sown. For several years past, but little fall wheat has been grown in the Eastern portion of Hay and Stanley, or in Tuckersmith, or Osborne, but tempted by the good crops realized by the few cautious ones who tried a few acres, those two years past, and excited by a different kind of exaggeration than that mentioned above, every one is at it, and he is no farmer at all who has not sowed this year from five to twenty acres. Those who risk nothing but a well manured summer-fallow will likely come out all right; but almost every kind of stubble is being turned over and sown. I am doubtful that some will reap in sorrow.

The threshing machines have been busy, sufficiently at least, to give us data enough to determine the yield of spring wheat, barley and oats. As was expected, the quality is good, but the quantity to the acre small. Spring wheat from 10 to 15, barley from 15 to 30, and oats from 16 to 35 bushels to the acre. Those figures tell of a lightish crop, and as the price is likely to be low, we must make up our minds to study prudence and economy at least one year longer.

The weather, so far through this month, has been splendid. In the enjoyment of the clear, cool sunny days, one almost forgets the rigorous cold and scorching heat of the past. The fields and woods are clothed in verdure of deepest green. The beasts are luxuriating in abundance, and are fast making up for the scanty herbage of the past. It is difficult to recognize the gaunt, excited-looking animal of six weeks ago in the well-fed, sleek, meek-eyed animal of to-day. The passing stranger, judging from the face of Nature, could at present see no premonition of the winter, that will so soon be upon us; but the old resident can already see the soft maple leaf with an altered colour, peeping out here and there from amongst the mass of green foliage. He knows that in a few weeks its mates will be sere and yellow, and that two short months will bring us 'fields and forests bare.'

## Hydraulic Power for Stumping and other Machines.

To the Editor of THE CANADA FARMER:

SIR,—Some back No. of THE CANADA FARMER contained an article from W. S., of Woburn, in which were some pertinent remarks relating to the application of hydraulic power to the extraction of stumps. I purposed then to notice the matter in an article on the subject; however, going from home shortly after, the matter was set aside. But now, on my return, seeing in the No. for 15th August, an article from "Nota Bene," of Sydney, which shows plainly that the hydraulic press is not commonly understood, I am induced to send the following:—

The hydraulic press, which is constructed on the principle that all the particles composing a body of water, when confined, are equally affected by pressure applied to any portion of it, is composed of two tubes of unequal calibre communicating with each other, having each a water tight piston adapted, the interspace being filled with water. If the piston in the smaller tube be forced down, an upward pressure, through the medium of the water, will be exerted upon the larger piston, the whole force of which will be in proportion as the aperture in which the larger piston works, is greater than that in which the smaller piston works. If the smaller piston is half an inch in diameter, and the larger, one foot in diameter, then the pressure on the larger piston will be 576 times greater than that on the smaller one. Thus, let the pressure given to the small piston be one ton, the large piston will be forced up, against any resistance, with a pressure equal to the weight of 576 tons. It would be easy for a single man to give the pressure of a ton by means of a lever. A man would therefore be able, with this engine, to exert a force equal to the weight of near 600 tons. It is evident that the force to be obtained by this principle can only be limited by the strength of the material of which the engine is made. Thus if the pressure of two tons be given to a piston, the diameter of which is only  $\frac{1}{2}$  an inch, the force transmitted to the other piston, if three feet in diameter, would be upwards of 40,000 tons, a force far too powerful for any material with which we are acquainted.

I feel fully satisfied of my ability to furnish the plan of a machine that would work efficiently in the extraction of stumps, on the above principle, such as "W. S." of Woburn then pointed out, which might justly supplant the many awkward, inconvenient, and inefficient modes of extracting them. Further, I am sanguine that I shall yet be able to apply this powerful agency to machinery in general.

T. A. Q. M.  
Romney, August, 1864.

## Poetry.

## The Ploughman.

BY OLIVER WENDELL HOLMES.

CLEAR the brown path to meet his couler's gleam,  
Lo' on he comes, behind his smoking team,  
With toll's bright dewdrops on his sunburnt brow,  
The lord of earth, the hero of the plough!  
First in the field, before the reddening sun,  
Last in the shadows when the day is done,  
Line after line, along the burning sod,  
Marks the broad acres where his feet have trod,  
Still, where he treads, the stubborn clods divide,  
The smooth, fresh furrow opens deep and wide;  
Matted and dense the tangled turf upheaves,  
Mellow and dark the ridgy corn-field cleaves.  
Up the steep hillside, where the laboring team  
Slants the long track that scores the level plain;  
Thro' the moist valley, clogged with oozing clay,  
The patient convoy breaks its destined way.  
At every turn the loosening chains resound,  
The swinging ploughshare circles glistening round,  
Till the wide field one billow' waste appears,  
And wearied hands unbind the panting steers.  
These are the hands whose sturdy labor brings  
The peasants' food, the golden pomp of kings;  
This is the page, whose letters shall be seen,  
Changed by the sun to words of living green,  
This is the scholar, whose immortal pen  
Spells the first lesson taught to hungry men.  
These are the lines that heaven commanded Toll  
Shows on his deed—the charter of the soil.

## Agricultural Enigmas.

NUMBER I.

I am composed of nine letters.

1. My 1, 4, 7, 9—You must keep warm and dry to preserve your health.
2. My 5, 2, 3, 7—Is what every farmer should have.
3. My 7, 8, 9—I hope you will always be able to do heartily.
4. My 9, 6, 2, 4, 1—Is one who is unfit to be trusted.
5. My 3, 8, 9—Is how a farmer wishes to see his cattle.
6. My 9, 4, 8—Is an agricultural product of warm climes.

My whole is a kind of grain.

NUMBER II.

I am contained in eight letters.

1. My 8, 6, 4, 1—Is a valuable article of a cleansing quality.
  2. My 2, 4, 5, 8—Is excellent feed for horses, &c.
  3. My 3, 7, 4—Is a stimulating drink, universally used.
  4. My 1, 7, 4, 8—Is a grain, excellent for fattening swine.
  5. My 4, 1, 7—Is an animal of the monkey tribe.
- My whole is a useful root, described by a certain author as the "Crutch of Life."  
Rugby, August, 1864. J. S. JOHNSTON.

## Markets.

## Toronto Markets.

"CANADA FARMER" Office, Oct. 1, 1864.  
Flour Improving, superfine and fancy \$4 25 per barrel, extra \$4 40 to \$4 75.  
Fall Wheat dull at 88c to 92c per bushel; the latter for few sam-  
ples.  
Spring Wheat held at 78c to 82c per bushel.  
Barley active at 82c to 86c per bushel.  
Oats unsteady at 55c to 40c for Canadian.  
Pease 55c to 62c per bushel.  
Rye 66c per bushel.  
Hay in good supply and demand at \$12 per ton for best.  
Straw active at \$7 to \$8 per ton.  
Provisions—Butter—Fresh, wholesale, per lb., 13c to 15c; retail per lb., 18c to 23c.  
Eggs—Wholesale, per dozen, 10c to 12 $\frac{1}{2}$ c; retail, per dozen, 12 $\frac{1}{2}$ c to 15c.  
Hams—Wholesale, per lb., 11 $\frac{1}{2}$ c to 11 $\frac{3}{4}$ c, retail, per lb., 12 $\frac{1}{2}$ c.  
Pork—Wholesale, per lb., 8 $\frac{1}{2}$ c to 9c; retail, per lb., 10c.  
Cheese—Wholesale, per lb., 10c to 10 $\frac{1}{2}$ c; retail, per lb., 12 $\frac{1}{2}$ c to 14c.  
Lard—Wholesale, 11c per lb.; retail, 12 $\frac{1}{2}$ c.  
Beef—Market well supplied; inferior—none offering, second quality, \$4 to \$4 50; extra, \$4 50 to \$5.  
Sheep scarce; \$4 to \$4 50 by the car load.  
Lamb each \$2 to \$2 25 for good.  
Calves—Each \$3 to \$4.  
Hides (green) per 100 lbs., \$4 to \$5.  
Calfskins per lb., 18c to 20c.  
Sheepskins 75c.  
Lambskins 75c.  
Coal \$7 to \$8 per ton.  
Wood \$4 to \$4 75 per cord.  
Salt \$1 25 to \$1 50 per bbl.  
Water Lime \$1 to \$1 50 per bbl.  
Potatoes—New plentiful at 50c to \$1.  
Cool Oil at 30c to 40c for Canada; 45c to 55c and 60c for Pen-  
sylvania.



Hamilton Markets—Sept. 29—Flour—Superfine No 2, \$3 20 to \$3 30, superfine No 1, \$4 10 to \$4 35, fancy, \$4 10 to \$4 25 extra superfine \$4 25 to \$4 30 superior extra, \$4 50 to \$4 75

London Markets, Sept. 29.—Fall Wheat 75c for ordinary samples, 90c to 95c for prime to extra. Spring Wheat, 70c to 72c for inferior 76c to 77c for good to extra. Barley at 75c and 79c, and occasionally 80c. Peas, 55c to 58c. Oats, 32c to 33c. Flax Straw, \$3 to \$10; with seed, \$10 to \$14 per ton. Hay at \$1.10 to \$1.14. Straw, \$1.50 to \$2.50 per load. Butter, dairy packed, 15c to 16c per lb. Skins—Green hides \$4 per 100 lbs; Pelts 25c to 40c. Skins 50c to 75c each. Hoot, from farmers' waggon, in large supply, and by the quarter very cheap. Beef \$2 to \$3.50 per 100 lbs. Mutton and Lamb, 2 to 4 per lb. Poultry—Dressed Turkeys 50c to 75c. Green 25c to 37c, each. Fowls, 37c to 50c. Ducks, 32c to 40c per pair. Butter, fresh in rolls, 16c to 18c. Eggs, 10c to 12c per doz. Fruit—Apples plentiful, at 25c to 62c per bushel. Y. apples abundant. Potatoes 40c to 50c per bushel. Turnips 37c, Onions \$1 to \$1.25.

Guelph Markets—Sept. 30.—Fall Wheat, per bushel, 75c to 80c. Spring Wheat, do., 65c to 70c. Oats, do., 29c to 31; Barley, do., 65c to 75c; Peas, do., 48c to 55c; Potatoes, per bag, 50c to 62 1/2c. Flax Seed \$1 20 to \$1 25. Hides, per 100 lbs., \$4. Hay, per ton, \$3 to \$12. Straw \$2 to \$3 50; Butter, per lb., 15c to 16c; Eggs, per dozen, 8c to 10c. Apples 20c to 62c. Wood, dry, \$2 to \$2 50. Turkeys 50c to \$1. Geese 25c to 60c. Chickens, per pair, 20c to 25c. Ducks 30c to 50c. Fowls 12 1/2c to 20c. Wool 36c to 38c. Beef \$3 50 to \$5 50, Pork nominal, \$5 to \$6. Mutton 3c to 6c; Feat, 5c to 6c. Pelts 10c to 20c. Lamb Skins 37c to 62 1/2c, Tomatoes, per bushel, \$1 50—Mercury.

Nimcoo Markets, Sept. 22.—Flour, per barrel, \$5. Corn meal, per 100 lbs., \$1 50. Buckwheat Flour, per 100 lbs., \$2. Fall Wheat, per bushel, 66c. Spring Wheat, per bushel, 75c. Rye, per bushel, 65c. Corn, per bushel, 60c. Barley, 75c. Oats, 40c. Peas, 50c. Buckwheat, 44c. Potatoes, 62c. Beef, per cwt, \$4 to \$5. Butter, per lb., 15c. Eggs, per dozen, 9c. Lamb, per lb., 9c. Hay, per ton, \$7. Firewood, per cord, \$1 75. Salt, per brl., \$2—Ascenper.

Belleville Markets, Sept. 29th, 1864.—Market for Barley very dull owing to the fluctuations in gold, 82c is the highest that has been paid this week, yesterday it was dull at 75c, buyers holding off. Wheat 80c to 85c for spring, 90c to 95c for fall. Rye 60c in good demand. Peas firm at 60c. Oats 40 to 41c. Potash, \$4 90 per 100 lbs. Hides, \$5 00. Sheepskins, fresh slaughtered 60c to 70c. Wool 2 1/2 to 40c. Beef is quiet and dull at \$3 to \$4. Pork, no fresh pork has yet been brought in; mutton \$18 per brl. Mutton, 4c to 5c per lb. by the quarter. Ducks 12 1/2c to 40c per pair. Potatoes, supply and quality better, at 40c a 50c per bushel. Int.

Kingston Markets.—Flour \$2 to \$2 25 per cwt. GRAIN—Wheat, 75c to 80c. Barley 85c to 91c, Rye, 60c to 65c; Peas, 55c, Oats, 40c to 45c. Beef, \$2 50 to \$4 per cwt. Mutton, 4c to 5c per lb. Hams, 10c to 12c, shoulders 8c to 10c per lb. Lard, 10c to 12c. Tallow, 8c to 10c per lb. Butter packed 17c; fresh, 20c. Cheese, 8c to 12c per lb. Eggs, 10c to 12c per dozen. Fair—American Apples less plenty and prices higher—\$1 50 to \$2 per barrel; Peaches scarce at \$2 50 to \$3 per bushel; Plums, \$2 50 to \$3. Onions, \$1 50 to \$2 per bushel. Potatoes 40c to 45c. Turnips 30c. Hides—\$4 per lb. Sheepskins, 60c to 65c. Hay, \$15 per ton. Straw, \$3 to \$4 per ton. Wood, \$3 to \$3 25 per cord—American.

Ottawa Markets, Sept. 27th.—Wheat—Fall wheat, per bushel, 90c to \$1; spring do., \$1. Flour, extra, per bbl., \$5 to \$5 60; superfine No 1, \$4 75 to \$5; do. No. 2, \$4 25 to \$4 50. Bags, extra superfine, per 100 lbs., \$2 38 to \$2 50, do. superfine No. 1, \$2 25 to \$2 28. Cornmeal, per 200 lbs., \$3 to \$3 50. Oatmeal, per bbl., 198 lbs., \$5 to \$5 50. Buckwheat, per bushel, 48 lbs., 40c to 45c. Rye, per bushel, 56 lbs., 50c to 55c. Barley, per bushel, 48 lbs., 65c to 70c. Corn, per bushel, 56 lbs., 60c to 65c. Oats, per bushel, 34 lbs., 43c to 50c. Peas, per bushel, 60 lbs., 60c. Beans, per bushel 60 lbs., \$1 75. Potatoes, per bushel, 17c to 20c. Turnips, per bushel, 15c to 20c. Carrots, per bushel, 25c. Timothy Seed, per bushel, 45 lbs., \$0 00 to \$0 00. Hay, per ton, \$9 to \$11. Straw, per ton, \$5 to \$6. Pork, per 100 lbs., \$7 to \$8. Beef, per 100 lbs., \$5, per lb., 4c to 5c. Mutton, per lb., by the quarter, 7c to 8c. Ham, 10c to 12c. Tallow, per lb., 10c. Lard, per lb., 10c to 12. Hides, slaughtered, per 100 lbs., \$5. Fowls, per pair, 25c to 30c. Chickens, 25c. Wool, fleece-washed, 40c to 42c; pulled, 30c to 35c. Apples, per bbl., \$4. Butter, fresh, per lb., 15c to 20c, tub, 13c. Eggs, per doz., 11c. Onions, per bushel, \$2.

Montreal Markets, September 29 1864.—Flour, per barrel of 196 lbs.—Superior Extra \$4 70 to \$4 80. Extra, \$4 50 to \$4 65, Fancy, \$4 35 to \$4 45. City brands of Superfine, \$4 25 to \$4 40. Superfine from Canadian wheat, \$4 20 to \$4 40. Superfine from Western wheat, \$4 20 to \$4 25; Western States flour, \$4 15 to \$4 20; Superfine No. 2, \$3 80 to \$3 90; Fine, \$3 55 to \$3 75; Middlings, \$3 10 to \$3 30. Pollards, \$2 90 to \$3. Bag flour, \$2 40 to \$2 50 per 112 lbs. Fair demand from local dealers, small sales of all grades above No. 2 quoted—Superfine at \$4 25 to \$4 35; Fancy at \$4 40. Extra at \$4 60. A sale of 1,000 bags of flour reported at \$2 40 to arrive. Oatmeal, per barrel of 200 lbs.—Range for good, \$4 75 to \$5. Wheat, per bushel of 60 lbs.—No sales reported. Pork, per barrel of 200 lbs.—Not much doing. Mess sold in small lots at \$17 45. Butter, per lb.—Quot; without change. Cheese, per lb.—Good Dairy about 8 1/2c to 8 3/4c. Some choice parcels have brought extreme rates.

Beauharnois Markets, Sept. 26th.—Peas, per 70 lbs. 75c to 77 1/2c. Barley, per 60 lbs., 75c to 77 1/2c. Oats, per 40 lbs., 33c to 35c. Flax Seed \$1 39 to \$1 40. Butter, fresh per lb., 16c to 18c. Butter, salt, per lb., 16c to 18c. Potatoes, per minot, 25c to 30. Onions, per minot, 60c to 60c. Honey, per lb., 10c to 11c. Eggs, per dozen, 12c. Chickens, 20c to 25c. Fowls, 30c to 40c. Dressed Hogs, per 100 lbs., \$7 to \$8. Hay, per 100 bds., \$6 50 to \$7. Straw, per 100 bds., \$2 to \$2 50. Green Hides, \$5 50. Ducks, 25c to 30c. Turkeys, 70c to 80c. Beet Wax, 20c 25c.

New York Markets, September 30.—Flour—Receipts, 8,441 barrels, market heavy, unsettled and 25c to 50c lower, sales 4,000 brs. at \$8 to \$8 15 for superfine State; \$8 25 to \$8 35 for extra State, \$8 40 to \$8 65 for choice do; \$8 60 to \$8 70 for superfine Western, \$8 50 to \$9 75 for common to medium extra western. \$9 50 to \$10 00 for common to good shipping brands extra round hoop Ohio. Canadian flour heavy, 25c to 50c lower; sales 3,000 brs. at \$8 30 to \$8 60 for common; \$8 65 to \$11 00 for good to choice extra. Rye flour quiet at \$9 to \$10. Wheat—Receipts 1,942 bushels; market dull and nominally 5c lower; sales 21,000 bushels at \$2 02 1/2; choice amber Michigan, at \$1 80 to \$1 95 for spring in lots. Rye heavy 3c to 5c lower. Barley dull and nominal. Corn—Receipts 40,221 bushels market heavy and lower, sales 36,000 bushels, at \$1 59 to \$1 59 1/2 for mixed western. Oats dull and lower at 87c to 87 1/2c for western. Pork firmer, sales 2,500 barrels, at \$40 to \$40 50 for mess \$41 to \$42 for now do, \$37 to \$38 for prkno. Beef dull, Stocks irregular.

Buffalo Markets, Sept. 29.—Flour—The market is very dull and prices favour buyers, XX Indiana red and white at \$10 50, Extra State, \$9 75 to \$9. Wheat market dull. Corn steady. Oats steady. Barley firm at \$2. Rye in fair request at \$1 25. Provisions—Pork in better supply, with small sales, heavy mess at \$41 to \$42.

Owego Markets, Sept. 29.—Flour firmer, but dull; sales at \$9 25 for No. 1 spring; \$9 60 for red winter, \$10 to \$10 25 for white; and \$10 75 to \$11 for double extra. Wheat unchanged but quiet, No. 3 Chicago spring hold at \$1 80; No. 1 Milwaukee club, \$1 90, No. 1 winter red Indiana, \$2. Rye held at \$1 60 for Canadian, without sales.

Chicago Markets, Sept. 29.—Flour dull and declined 10c to 25c. Wheat dull; sales at \$1 60 to \$1 60 1/2 for No. 2. Corn very dull and declined 1c, sales at \$1 30 for No. 1, and \$1 29 for No. 2. Oats steady at 6c to 6 1/2c. Beef Cattle.—In beef cattle the market has been quiet, the receipts being restricted, and consisting entirely of medium and common grades of stock. Entered sales, 650 head, at \$3 25 to \$5 25, chiefly at \$3 25 to \$4 per 100 lbs. Previous quotations unchanged. Hogs have been in moderate supply, with entered sales amounting to 773 head, at \$6 70 to \$11 25, chiefly at \$9 50 to \$10 25 per 100 lbs. Market very quiet; prices weak, with a downward tendency.

Advertisements.

Credit Sale of Imported & Thorough-bred CATTLE & SHEEP.

Consisting of Durham, Galloway, and Ayrshire Cattle, Leicester, Cotswold, and Shropshire Down Sheep.

MR. G. MILLER will offer by Auction, on Lot 16, 10th Concession, Markham, C. W.,

ON WEDNESDAY, OCTOBER 5, 1864,

- THE FOLLOWING STOCK, CONSISTING OF
2 One-year-old Durham Bulls,
2 Spring Calves do do
3 Galloway Cows,
3 do one-year-old Heifers,
1 do Heifer calf,
4 Two and three-year-old Grade Heifers,
4 One-year-old Grade Steers and Heifers.

- SHEEP.
10 Imported pure-bred Cotswold one shear Rams,
15 One and two-shear Leicester and Cotswold Rams,
20 One two and three shear Leicester and Cotswold Ewes,
8 Leicester Ewe Lambs,
4 Shropshire Down Ram Lambs,
1 do two shear lam,
1 Imported Yorkshire Redding Sow in pig, winner of three first Provincial prizes.

TERMS OF SALE. All sums of \$25 and under, cash, over that amount, twelve months' credit on approved joint notes. Sale to commence at 11 A.M. Markham is distant from Scarborough Station, on G. T. Railway, 10 miles from Toronto 20 miles. A Stage runs daily from Toronto to Markham Village.

October 1, 1864. 17-1t

CIDER MILL SCREW! PRICE, - - - - \$12.00.

WE are making the CHEAPEST and BEST CIDER MILL SCREW IN THE WORLD Whole length, 4 feet. Length of thread, 3 1/2 feet. Diameter of Screw, 4 inches. Weight, including Nut, 125 lbs. Address S. F. & F. E. CO. Also, PUMPS of all kinds for Farmers' use. J. A. RUMSEY, Treasurer, Sonoca Falls, N. Y.

TURN-TABLE APPLE PARERS.

THE SUBSCRIBER is Manufacturer's Agent for the sale of the above celebrated Machine, and is now prepared to fill orders, WHOLESALE AND RETAIL, AT LOW PRICES, FOR CASH.

This APPLE PARER is unsurpassed for strength, durability and thoroughness of execution. It will cut closer to the blossom than any other machine, and excels in paring uneven, pear shaped Apples or Quinces. W. HEWITT, Hardware Merchant, Corner of Yonge and Adelaide Streets, Toronto. 18-1t

FLAX!

FOR SALE, a SEED THRESHER, a CLEANER, and a SCUTCHER, driven by water or steam. Can be seen at work. Enquire of the Editor of THE CANADA FARMER, if by letter, prepaid. 18-1t

FARM FOR SALE.

THE SUBSCRIBER offers for sale the beautiful and fertile FARM of CHERRY BANK, Lot 19, 6th Concession, Burford, containing 156 acres, 120 cleared. Excellent Frame House, two Frame Barns and other Buildings, good Orchard and Garden, Running Water and plenty of Timber. A superior Farm for either Grain or Stock raising—conveniently situated every way. Price \$6,000, and 20 acres of Fall Wheat given in.

JOHN A. SMITH, Cathcart P. O., Brant County. 18-1t

WANTED,

CANVASSING AGENTS for "THE GLOBE" and "THE CANADA FARMER" in all parts of Upper Canada. Address THE PUBLISHER, Toronto. 17-2t

BEEES FOR SALE, BY THE UNDERSIGNED, this Fall, 40 YOUNG BEE-HIVES, of a superior kind, which swarmed since the 1st of June last. The price from \$4 to \$6 each live. Directions given, if required. DANIEL McNAUGHTON, Springdale, Onondaga P. O., Co. of Brant. September 8th, 1864. 17-2t

IMPORTANT ANNOUNCEMENT: To Breeders, Farmers and Agricultural Societies! MORETON LODGE, GUELPH, C. W.

MR. W. S. G. KNOWLES begs to announce that he has received instructions from Frederick Wm. Stone, of Moreton Lodge, Guelph, C. W., to sell by Auction on WEDNESDAY, the 14th day of OCTOBER next, about twenty head of very superior pure-bred SHORTHORN, consisting of Bulls, Cows and Heifers, that have been bred from animals of high repute, several of which have been awarded First Prizes in their classes, at the Provincial Exhibitions. Also, a few young HEREFORD BULLS of great promise. About forty grand Cotswold Shearling and other Rams, fifteen superior South Down Rams; a few the pure-bred Leicester Rams. Also, several pairs each of pure-bred Cotswold, South Down and Leicester Ewes. About fifty pure-bred Berkshire Pigs (bred from first-class imported animals), of various ages. Catalogues, with Pedigrees and other particulars, will be ready to issue by first of October, and may be had on application to Mr. Knowles, or of Mr. F. W. Stone, Guelph, C. W. Moreton Lodge, Guelph, 12th Sept., 1864. 17-2t

J. A. SIMMERS, SEEDSMAN, WEST MARKET PLACE, TORONTO, C. W.,

BEGS to inform his friends and the public that his annual supply of HARDY DUTCH FLOWERING BULBS, for Fall planting, has just arrived in first-rate condition. The collection is larger than usual, and comprises everything of merit. J. A. S. only imports Bulbs of first quality, and supplies them as reasonable as any house on this continent. Catalogues, giving description and prices, supplied gratis on application. Toronto, Sept. 15, 1864. 17-2t

PERUVIAN GOVERNMENT GUANO.

THE undersigned have on hand a few tons of this valuable Manure, which they are anxious to introduce among Canadian Farmers and Horticulturists. They offer it for sale in small quantities, in order to give the Manure as wide a circulation as possible. Should sufficient encouragement be given, they have made arrangements to receive importations direct from the Chichas Islands, by which they will be able to offer the Guano at a price much below that of any other manure. The following is one illustration of the comparative result of the application of different manures at a cost of 18s for each, arrived at by experiments made upon several quarter-acre plots of land, by Mr. E. T. Beame, of Stover:—

Table with 5 columns: Manure Applied, Quantity, Weight of hay cut per 1/4 acre, Cost of Manure, Net Gain. Rows include None, Sup. of Lime, Nit. of Soda, Guano.

Further statistics, and all other information, may be obtained from DUNCAN, CLARK & SCOTT, Ontario Hall, Church Street, Toronto

HORSE HAY FORKS.

ON EXHIBITION AND FOR SALE, AT the AGRICULTURAL HALL, Corner of Yonge and Queen Streets. Toronto, Aug. 1, 1864. 14-1t

LANDS FOR SALE.

TWENTY THOUSAND ACRES OF LAND, both wild and improved, and at all prices, for sale in various townships throughout Upper Canada, cheap and on easy terms. For lists and particulars, apply to the proprietor, T. D. LEDYARD, Barrister, &c., South-west cor. of King and Yonge-sts., Toronto. Toronto, March 15, 1864. 5-1t

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