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VOL. XI. No. XVIII.
(NEW SERIES)

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The Field.

Need of Good Judgment in Farming.

The farmer must be a reflective, reasoning man. He must not jump at conclusions, nor blindly follow precedents, nor meekly believe all he reads or hears about practical agriculture. Valuable as are the researches, facts and opinions collected by farm journals, they need to be winnowed in the fanning-mill of common-sense. Allowance must often be made for diversities of soil, climate, and circumstances. Too many farmers are guided by tradition, and wedded to long-established usages. Even these, although in many cases the result of careful and often repeated experiment, need to be re-investigated and reconsidered. It is not well to be hasty in abandoning what has been tested and proved time and again. Nor is it wise to be tied to any particular course of action, however much it may be in vogue. There are certain great principles which underlie all successful farming. These must be thoroughly understood and vigorously applied, all arguments to the contrary notwithstanding.

One of these foundation principles is that whatever is taken from the soil in the form of crops, must be returned to it in the way of manure of some kind. Either farm-yard dung, artificial fertilizers, or the volatile gases aloft in the air absorbed by the following process, must be given to the land robbed and exhausted by cropping. Another great principle is that the toil and cost of tillage may be lessened, or at any rate, more evenly distributed by a rotation of crops. These and similar principles must be kept in view, and farm practice made to conform to them, or the results will be disastrous.

Certain statements now aloft in the agricultural papers render these observations timely and important. A couple of prominent farmers in England have recently had remunerative sales of standing crops raised on farms not stocked with flocks and herds. These estates have for several years past been devoted to the culture of grain and grass, and the products have been sold off and consumed elsewhere without being returned to the land in the form of manure. The wonderful yields and high prices obtained are being trumpeted abroad, as though at last a method of profitable farming without manure had been discovered. But it must not be forgotten that the farms in question have been liberally dosed with chemicals. On one of these farms, in regard to which we have the details of management, artificial manure is applied to the value of £2 or £3 sterling per acre, the principal applications consisting of bone-dust, superphosphate, and guano. During the season just reported an aggregate outlay of £1326 was made for these artificial manures. Out of the total proceeds of the year's produce, which amounted to the gross sum of £4628, the expenses

came to £3185. There was a handsome balance to the good of more than £1100, but it is no better than the average profits of equally good farming on the usual system of mixed husbandry. Let it not be supposed from a superficial perusal of these narrations, that a plan has been found by means of which nature can be cajoled into a yield of plenty, without the ordinary investment of capital and labor. It is but a choice of methods. Most farmers keep stock and provide a supply of manure by the consumption of crops on the premises where they are grown. It is of course possible to dispense with the stock, and substitute artificial for natural manure, but manure of some kind there must be, if a high standard of cropping is to be maintained.

A French chemist, M. Ville, published a little work some years ago, entitled "High Farming without Manure," in which he advocated the system which has been actually carried out by the two English farmers to whom we have referred. As a matter of experiment, these modes of farming are interesting and useful; whether it is well to substitute such a style of procedure for that which generally prevails, is another question. There may be farms on which it may be wise and profitable to pursue such a course, at least for a time, but it can hardly be regarded as farming for the million. In the study and imitation of these examples, there is large room and imperative call for that exercise of independent judgment and strong common sense which it is the object of this article to inculcate.

It must be borne in mind also that thorough tillage and clean culture have much to do in securing the results under consideration. Long ago agricultural practice coined and made current the maxim, that "tillage is manure," and few have any idea how high a standard of fertility may be reached and maintained by thoroughly stirring the soil and keeping it perfectly clean. Mr. Lawes, of Rothamstead, England, has for many years raised an average of wheat on land simply well and cleanly tilled, which exceeds the average yield of that grain on Canadian farms. There can be no doubt that a large proportion of the strength of land is worse than wasted in the maintenance of an enormous production of weeds. Just to get rid of them without any increased use of manure, would largely augment the yield of grain and grass. But nature is inexorable and cannot be fooled by any ignoring or violation of those laws which the Creator has ordained; and while much may be done by thorough and clean tillage without manure, it still holds good, that high fertility can only be gained by the liberal use of manure, either natural or artificial.

As a further illustration of the subject in hand, reference may be made to an article now "going the rounds," entitled "Rotation not a necessity," and credited to a leading agricultural journal. It has always been maintained by intelligent writers on the

topic, that the same crop may be raised on the same land year after year, if enough fertilizing matter is given back to the soil. The difficulty of doing this, in view of the general scarcity of manure, makes it advisable to have a rotation. We know that market gardeners grow the same vegetables in the same ground for many years in succession, and often with increasingly profitable returns. But they put an amount of manure into the soil which quite staggers and astounds the ordinary farmer. What can be done under special circumstances is one thing, and what it is advisable to do under ordinary circumstances is another. In cases where manure is cheap and super-abundant, it may be well enough to dispense with the rotation which the best authorities have so long and so strenuously urged; but we confess we do not know of any such cases. Market gardeners are paid for their large outlay for manure, by early crops and succession of crops in one season. Confined in their operations to a limited area, they can afford to do that which is often inadvisable if not impracticable in a narrower field. It would be abstractly preferable, perhaps, if adopting the motto, "a little farm well tilled," land in general were brought up to the pitch of productiveness attained in the best market gardens, but this implies a vast revolution, only to be attained, if ever, in course of time, meanwhile, such manuring as is found practicable, conjoined with a judicious rotation of crops, will prepare the agricultural world for "the good time coming," when farms shall be quartered as to size and quadrupled as to crops. There are some good old-fashioned ways which it is as well to persevere in with constantly improving persistency, and among them we are inclined to rank manuring and rotating. At any rate innovations on them had better be introduced with caution, and with constant deference to principles which are unchangeable as the everlasting hills, and even more so.

Reading agricultural journals is like listening to preaching. No man's *us dixit* is to be received as all-sufficient. There must be reflection, judgment, and common-sense in the practical use and application of all teaching. The standards must be consulted, great principles must be kept in view, and conclusions reached according to the grand old prescription of Infinite Wisdom:—"Prove all things, hold fast that which is good."

HOW DRAINS ACT.—The water which runs into drains dug in tough clay soil, enters from the sides and the bottom, and not from immediately above the drains. The toughest clay is sufficiently permeable to water to allow it to pass through readily, and after the drains have been in operation some time, regular and permanent water channels become established in the soil leading from above to the bottoms of the drains. In digging drains in tough, compact clay, numerous small veins of water are cut, which show very clearly how readily the water will pass through such soil as soon as outlets are provided. The advantage of the deeper drains is thus explained, and it is readily seen that their influence extends further in proportion to their depth.

Fall Feed.

Owing to the severe drought adverted to in our last, and which still continues at the date of this writing, a scarcity of fall feed appears to be inevitable. Working horses and milch cows can only be kept in good condition already, by giving them well nigh the winter's allowance of dry feed. Short supplies of winter fodder during the coming season are foreseen, and, as a consequence, hay has risen in price, and farmers are selling and killing off an unusual proportion of stock. Economy in the care and use of hay, straw, and winter forage generally, is the lesson of the hour. Straw should never be wasted, least of all in a season like this. It will be good policy to use other material for bedding stock during the coming winter. Dry muck, forest leaves, saw-dust, and various things possessed of soft and absorbent qualities, may take the place of straw as bedding, and leave it to be employed for food. Clean, well-saved straw is as good fodder as much of the hay which comes into the market. Chopped fine in a cutting-box, and mixed with bran or meal, it makes a palatable and nutritious feed, on which horses can work hard, and yet keep in prime order. Corn-stalks, chaff, turnip-tops, the small potatoes, fallen apples, pumpkins, and whatever stock of any kind will eat, should be taken care of, and fed out with judicious economy at such a time as this.

It may be that late rains and an unusually fine, long fall may improve the winter outlook, and afford a prospect of greater plenty than we have at present. But it will be wise to prepare for the worst, and take all possible precautions. The autumn is now advanced, and even though growing rains should visit us, early frosts will be apt to check the growth of grass and other herbage, so as to keep the forage supply scanty. Whatever may be the character of the remainder of the season, it will be good policy to husband all resources, and dole them out, not indeed with pinching parsimony, but with judicious care. Let it not be forgotten, amid other points of good management, that stock well kept in the fall, winter easier and better than if let go down in flesh; and last but not least, that comfortable, warm stabling is a great means of lessening the consumption of winter feed, and also every way promotive of the welfare of animals.

The Clover Crop.

Probably no other crop is so badly managed as the clover crop, none is put in the ground in a more careless manner, and none is used so hardly, for it is pastured in the spring, up to the moment, then cut for hay, and then again for seed, and again pastured in the fall, until winter stops its growth, when it is left to be frozen and thawed and exposed to every change of weather until spring comes again, then it is pastured until it is time to plough the soil, or what is left of it, for corn.

It is not at all strange that when this crop is so used its full value is not appreciated, although the fact that it survives all this, and finally, in its last stage, helps to make a crop of corn, is not the least of the many proofs we have that its value is greatly underrated. Again, its mismanagement does not stop here, but when it is cut for hay it is very rarely that this is done in such a way as to secure the full value of the crop.

When clover is in full blossom it is at its point of greatest value for feed. It then contains a much greater amount of nutriment, and much less of indigestible matter than when fully ripe.—*N. Y. Times.*

EFFECT OF PLASTER.—It has been shown that at the Michigan Agricultural College a single bushel of plaster added a full ton of hay to the yield of an acre of ground in the five, most of it in the four mowings that followed—two crops being taken off the ground each of the two years succeeding the sowing of the plaster.

Agricultural Implements.

Machinery for Land Reclamation.

In the CANADA FARMER of the 1st inst. there appeared, under the head of "Steam Cultivation," a short article from the *Farmer (Eng.)* relating to the work of land reclamation now going on at Lairg, under the direction of the Duke of Sutherland; and as most of our readers will no doubt feel interested in a description of the machines and appliances used in accomplishing the wonderful results therein stated, we offer no apology for returning to the subject.

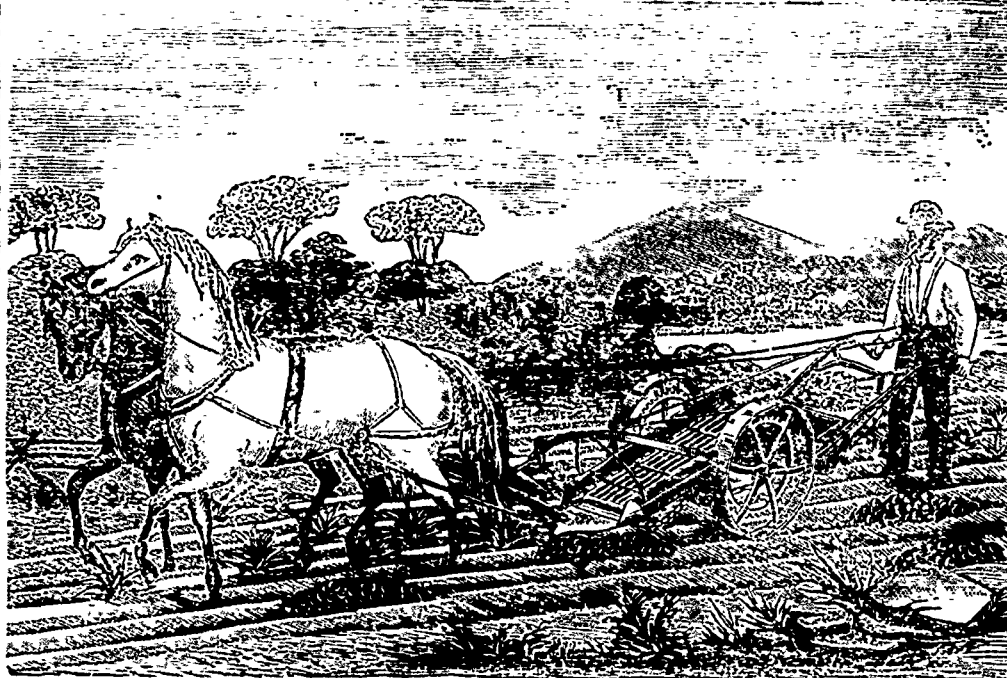
It has already been stated that the land operated upon is a vast moor, and the first operation is to clear the same of trees, where those happen to exist. This is done by steam power. A chain attached to the rope belonging to the steam engine, and composed of steel wire, is fastened round three or four trees, which are then torn up, roots and all, by the engine, and taken away with as much ease as a man would pull up mushrooms. "Nothing we had previously seen," writes a visitor, "gave us such an idea of the stupendous power of steam—though, of course, the trees were not very large, nor their roots very deeply fixed." The plough used in breaking up the soil has

The work was well done, though once or twice it was observed that in soft places the soil was pushed along for a short distance in front of the plough, instead of being turned clearly over.

After the plough followed a number of laborers to pick the stones out of the open furrow and throw them back.

Another very simple, but most useful implement was the machine for gathering the stones off the land, also worked by the steam engines. It is something like a box without a lid, covered in at the ends, open in the middle, and slightly curved, like the rockers on a rocking-chair. This is dragged over the land upside down, and collects a large number of stones underneath it. It is then turned over by steam power; the stones are thrown into it by hand, and it is then dragged away, and discharges its load where stones are required for fencing or building.

Wide, open drains are being made, as main drains, in various places by manual labor, to carry off the water; whilst an implement, again worked by steam, is used to assist in making the sub-drains. This is also something like an anchor, with two small wheels in front, and by bringing it along the same line twice, the soil is loosened to a depth of about three feet. The rest of the cutting and the throwing out of the soil is done by laborers. The rock



a sort of double share, with one breast, turning on a hinge, so that it can work both ways. At each end, in front of the share, there is a large steel wheel which cuts through the turf or heather, and makes a lip in which the share follows; in addition, at each end, behind the plough, there is a drag—something like a ship's anchor which pulls up the stones, and also acts as a subsoiler. The plough has four wheels (two on each side), perhaps three feet broad, which prevent it from overtaking, and one of which acts as a presser on the furrow after being turned up by the plough. This presser is on the whole necessary and advantageous, as it consolidates the land, and keeps in its proper place the enormous furrow, one, we should say, 18 inches broad by 10 inches deep, which might otherwise fall back again. The plough is said to be able to turn up about 1½ acres per day, which we think probable, because, although the pace does not appear much greater than that of an ordinary horse plough, the furrow is considerably broader

"It was wonderful," says a correspondent of the *Mark Lane Express* "to see the plough going over stony ground, turning up many large stones, and passing over, without any apparent damage to the machine, the rocks that were too large for it to move.

and roots of trees, which are too large to be taken out by steam power, are blasted by dynamite.

The cost of the works, including clearing, ploughing, draining, building, fencing and road making, is estimated at from \$115 to \$125 per acre. The crops on the land which was cultivated last year are very good, both oats and turnips, and some of the land where the turnips were growing appeared of a very nice mixed soil. The land which is at present under cultivation varies much in character and quality; some of the stuff which is turned up is clayey, some mixed with a sort of a weak whitish sand, some peat (which, by-the-by, is burned in the engines), and did we not know by experience that such land is sometimes much better than it appears, we should say that a great deal of it would scarcely pay for cultivation."

Potato Digger.

The illustration given above is that of "McCallum's Potato Digger," manufactured by Messrs. Rosamond, Her and Scott, of Almonte, a specimen of which is now, we understand, on exhibition at the Guelph Fair, and which will also find its way, no doubt, to the Provincial Fair here, next week. It is highly spoken of as being at once simple, durable and cheap, and, best of all, an implement that does its work well.

Wind Mills in Holland.

The continual winds blowing from the Atlantic furnished the power gratuitously to whirl the vanes and turn the water-wheel attached to the wind-mill. There has been little or no improvement made in this machine in Holland for 1,600 years. No other power is so simple, cheap, or reliable. Without its application, two-thirds of Holland and one-fifth of Belgium would even know, in the noon-day of steam power, of necessity have to be yielded back to the ocean, because the cost of steam machinery, fuel, repairs and attendance, could not be supported from the profits of the land.

A correspondent of the *Chicago Tribune* says "there are 12,000 wind-mills in Holland and Flanders, Belgium, each doing from six to ten horse-power service, according to the strength of the wind, and working twenty-four hours per day, and every day in the month during the rainy season, and when the snows and ice are melting and the streams are high. The annual cost of the wind-mills in Holland is \$4,000,000. Twenty times that sum would not operate steam power sufficient to do their work, nor recollect that all the coal consumed in Holland has to be imported from England or Belgium.

Go where you will, you are never out of sight of wind-mills in motion. In the suburbs of large cities and at certain points where the water of the ditches and canals are collected to be thrown over the embankments, they are congregated like armies of giants, and never cease swinging their long, huge arms. They are constructed of much larger dimensions than those seen in the United States. The usual length of the extended arms is about 80 feet, but many of them are more than 120 feet.

But the wind-mills in Holland are not exclusively employed in lifting water, but are used for every purpose of the stationary steam engine. I observed a number of them at Rotterdam, Antwerp, the Hague, and here at Amsterdam, engaged in running saw-mills, cutting up logs brought from Norway, and others were driving planing-mills and flouring-mills, brick-making machines, or beating hemp.

Those used to lift water out of ditches into canals and embanked rivers have water-wheels instead of pumps attached to them, as they are less liable to get out of order, and are thought to remove more water to a given power.

Shelter for Tools.

Now that harvesting is over, take care of the tools. A harvester that costs \$200, is too expensive a piece of machinery to lie out in all weathers, exposed to wind, sun and rain. One of our correspondents some time since made the startling announcement that on an average they did not do over two months' work before they were worn out.—estimating that two weeks' labor was got out of them each year, and that in four years they were used up. Now this ought not so to be, and yet it is on a par with much of the farming in the west. Build a shelter, be it ever so cheap, and store your machinery in it the first thing after getting your grain in the stack. Take out the sickle, oil it, and lay it away for safe keeping in your house. Clean thoroughly all the metal work and rub it over with tallow, to save rusting, for this not only destroys your machine, but causes friction, which will rack it to pieces when it is next needed for use. And as soon as you can, paint it over. Paint preserves your wood and keeps it from sun cracks and rot. If it is sheltered and painted, and kept from rusting, and the nuts properly screwed up when in use, a good harvester will last a dozen years with occasional renewal of the sickle.

Let your tool house be as much of a necessity on your farm as your stable for the horses; and if it is not built, let it be laid down in your minds as one of the most important things needed in the immediate future.—*Farmers' Union.*

THE TROY N. Y. papers contain accounts of a wonderful piece of mechanism which has recently been produced by F. Schroeder, an Amsterdam jeweller. It is called the "Great Mechanical City," and is twenty feet long by fifteen feet wide. There are houses, castles, churches and stores in it, just as they appear in almost any European city. People walk and ride about. Horses and waggons and others railway cars pass through the streets. Boats pass up and down the river, while some are loading and unloading at the docks. Mills are in motion. A fountain plays in the public park, and a band of musicians fills the air with melody. There are also forts with soldiers parading about them, blacksmiths' shops with artisans at work in them, and pleasure gardens with people dancing in them. Other scenes go to make this a wonderful structure indeed.

Horticulture.

EDITOR—D. W. BEADLE, CORRESPONDING MEMBER OF THE ROYAL HORTICULTURAL SOCIETY, ENGLAND.

THE ORCHARD.

Seasonable Notes.

SEED-BEDS—See to it that the young plants are properly shaded. Keep the fingers and hoe constantly on the move, the former in removing weeds and the latter in preventing undue caking of the soil.

NURSERY TREES—These should receive, so far as practicable, the same treatment as the seed-bed plants. Substitute new labels for such as are injured or defaced, referring to the "plan" in all cases of forgetfulness or uncertainty. If no such plan exists, let the drawing of it occupy a portion of the very first quiet evening or wet afternoon there is to spare, and do not until the orchard also and every field, fence, ditch, stream, &c., on the farm is embraced in the sketch.

SPRING PLANTED TREES should be looked after closely, as the recent drought will have told severely on such as were not very carefully set out. Wherever symptoms of unhealthfulness appears, the soil should be well stirred with a fork, or altogether removed to a depth of three or four inches, and a good watering administered, after which the soil may be replaced, and a heavy mulch applied, as recommended last month.

EVERGREENS—Many persons prefer transplanting these in spring, but they may be removed with equal success now if due care is taken that the roots are not injured by too close cutting or by exposure. Select a damp, cloudy day; make your holes roomy enough laterally—very many persons blunder in this respect, leave as large a mass of earth as possible adhering to the roots of the tree or shrub about being displaced. Water liberally at time of planting if the soil is dry, and there need be little fear about the result.

DRYING FRUIT—A fruit-dryer of some kind is now-a-days considered indispensable by orchardists of any pretension, and there is little doubt that the enhanced value of the fruit treated in this manner, not to speak of the vast amount of drudgery saved, will more than counterbalance all preliminary outlay. In cases in which the supply of fruit is limited to the requirements of the household, the process of sun-drying is usually resorted to. The fruit after being pared, cor'd, and sliced into pieces of the proper size, is placed in thin layers on frames or sashes, and exposed to the direct rays of the sun. A covering of thin gauze will exclude flies and other insects, and the drying process will be very much accelerated if the frames are placed in a warm room at night, and during the prevalence of wet or cloudy weather.

MARKETING FRUIT.—The practice of shaking or knocking the fruit off the trees is a most reprehensible one under any circumstance, and especially so as regards fruit intended for market. If it is true that "a little leaven leaveneth the whole lump," it is equally certain that a single bruised apple has been the means of spoiling a whole barrel. We have seen a number of appliances for picking fruit—one of which was described in a recent number of the *CANADA FARMER*—but we are inclined to think that where the fruit is very choice and great nicety is required, hand-picking is the best, as it is undoubtedly the safest method of all.

A STRANGE effect seems to have been produced in Blenheim this summer either by disease, lightning, or drought, on many trees. In a number of orchards the outer branches of the apple and pear trees are seemingly scorched and withered up. Also in the woods many pines and other trees are shrivelled up and brown looking.

Fruit-Keeping.

A correspondent of the *Media, Pa., American* gives in that paper an account of a visit to the fruit-preserving house of Nathan Hellings & Bros., at Bristol, Bucks County. The Messrs. Hellings are fruit dealers, doing business in Philadelphia, and an experience of twenty-five years has taught them that "heavy losses were often entailed, caused by the rotting of fruit in stock, this occasioned by the sudden changes of temperature, and by what is technically known by the trade as murky weather. The need, therefore, of some method by which the finest grades of foreign and domestic fruits could be kept, was universally acknowledged. But, whilst thus so commonly recognized as a need of the trade, all efforts put forth to secure the much desired result were regarded, even by the trade, as chimerical and visionary. Mr. Hellings, however, at once went to work, experimenting as to the needs of the case. A series of experiments were entered upon, resulting in the discovery that for most hardy fruits, whether foreign or domestic, a mean temperature of 36 to 38 degrees was needed. Farther, it was demonstrated that not only was this low temperature essential, but that the air must be dry and pure, embracing scientific principles of ventilation and circulation."

On arriving at the house which was built by Mr. Hellings to secure these conditions, the narrator was furnished an overcoat and taken into the fruit rooms. The first room entered was cool, but the larger inner rooms were cold, the thermometer standing at 35°, while outside it indicated 85°.

"There was a striking peculiarity noticeable in the rarity of the air in the house, the exhalations of our breath seeming almost as dense as steam. Another feature was that the air was exceedingly pure, for amidst all that array of goods no effluvia of anything savoring of fruit, could be distinguished. On my remarking this, Mr. Hellings, laughing, replied, 'There's the secret; the whole principle involved in this business is to arrange things in such a way that the fruit flavor cannot escape. And herein is the great difference between a system of fruit preserving which allows the flavor to escape and that which retains it. Have you ever noticed on entering a cellar used for the storage of apples, how strongly the entire place would smell of the fruit, thus demonstrating that the bodies were held in bondage, whilst their spirits were free?' We want both, and we think by this system this much is secured."

"Samples of the russet, the cider apple, the spy and the French spit were each severally tested, and in point of appearance as well as fineness of flavor, they could not be surpassed. These apples, or most of them, were put here last fall, some russets had been here two years, while samples of Bucks county cider apples were shelved in 1872. Strawberries have been kept in this house upwards of thirty days, and used in prime condition, looking as plump and fine as when picked. Pears, always difficult to keep, have been kept over eight months, and sold at fabulous prices. In cutting several of the apples, the core and pips were found to be sound and perfect, a pretty severe test. Mr. David Landreth, a personal friend and neighbor of Mr. Hellings, put a few apples to a still more severe test some few months ago. Professor Octwin Smith, an acquaintance of Mr. Landreth's, was returning to England, when, at the instigation of the last named gentleman, a basket of large apples was packed and duly put aboard the vessel as a gift to the professor. These apples had been in the fruit house since last fall. They stood the test of the sea voyage, and a part of them were eaten on the Liverpool Cotton Exchange, to the astonishment of those Britishers of the boards. The main design of the inventor has been to provide a house that can successfully keep for months together, and if need be, for years, fruit for which at the time there may be no demand, and which, if sold at all when the markets are glutted, is sold at ruinous rates. Nor is the invention limited in its operations to fruit. Beef has been housed for ten weeks, and found to be as sweet when cooked as though fresh from the slaughtered carcass. Goods are brought here from Spain, from the West Indies and the Mediterranean. The firm also own a similar storage house in Niagara country, N. Y."

"In a personal visit to this last mentioned house, a year or two since," says the *Country Gentleman*, "we were struck with the fact that the room in

which fruit is kept is very dry as well as cold. In ordinary cellars, and in most rooms where ice is used as a preservative agent, the air is usually quite moist; but in Mr. Helling's house, nails driven three years before were as bright as if freshly driven, and a very careful examination showed no signs of mould or fungoid growth in any part of the room, or on fruit lying on the floor. The room was fitted up like an ordinary fruit cellar, with bins and shelves, all made of pine lumber, unplanned. The only secret thing about it was the manner of using the ice to keep the room cool, without the deposition of moisture. Bins and shelves are rented to other dealers occasionally, and the plan is evidently considered successful in that locality."

Winter Apples.

As the time for gathering apples is near at hand, a few suggestions concerning the best method may be in order now.

In many sections of the country apples are very plenty and will not find a ready market at anything like a fair price unless they are gathered in the very best condition and put up in such a manner as to indicate a superior quality. If apples are to be put in barrels to be sent to market, the following points demand careful attention:

1. The barrels must be sweet, clean, and free from nails on the inside.

2. The apples must be picked from the tree by hand, when perfectly dry, and placed carefully in the barrels.

3. Not a single imperfect apple—either wormy, ill-shaped, decayed, or bruised—is to be placed in any barrel, which is to be sold for No. 1.

4. No leaves or stems are to be put in.

5. The barrels are to be filled full after they are shaken down. The head will crowd a few of them but the mass will then go down without bruising, while if they are not crowded by the head they will roll around and many of them be damaged.

6. The seller should have a stencil plate and put his name and address on every barrel which he sells. In this way he will soon obtain a reputation, and his fruit will be in demand.

If the above hints are followed, fruit growers and dealers both will be better satisfied, and do a more profitable business than they can if the careless and negligent manner of picking and packing, of which so much complaint has been made, is allowed to prevail.—*Practical Farmer.*

Lime for Apple Trees.

A successful pomologist of New Jersey writes the *New York Herald* that he once noticed that a tree standing in the immediate vicinity of his dwelling had all at once put forth with renewed energy, and he was at a loss for some time to define the cause. On examination he found that a quantity of lime, which had accidentally been spilled, and rendered worthless by becoming mixed with the refuse, on the stable floor, had been blown at the foot of and around the tree, and to this, as the principal cause, he immediately accredited the revivification and renewed fructification of the tree. Taking the hint from the incident, he purchased twelve casks of lime and applied half a bushel to each of the trees in his orchard, and found that it produced immediate beneficial effects. Not the health of the tree only but the quality of the fruit also was greatly improved. The *Herald* adds that it has known some farmers to make it a regular practice for a succession of years to throw caustic lime around their apple trees in the spring and summer.

In our own, on the farm, we found that leached ashes worked about the same result as given twice above. A pear tree close by a leach grew twice as rapidly as one a few rods away.—*Ohio Farmer.*

Neglected Culture.

The annual report of the New Jersey State Agricultural Society gives neglected culture as having the strongest retarding influence in that state on fruit culture and orchard planting. The old orchards, we are told, "are sorry sights to look at," simply for want of proper culture and manure. We know many such, that to our knowledge have not had a shovelful of manure in 15 years, removing during this time not only what applies the trees bare, but also a cutting of hay once a year. This, too, by excellent grain farmers, men who would not think of planting a crop of corn or potatoes without a full dose of manure for each. This has been the great difficulty everywhere; but few of those who plant orchards, whether large or small, being willing to give them the care they bestow on annual crops.

THE FRUIT GARDEN.

Seasonable Notes.

EARLY PEARS intended for home use should be gathered at maturity, and placed to ripen upon shelves in some cool, airy situation; this will increase their flavor very much.

STRAWBERRY PLANTS, though somewhat late, may still be set out without much risk; but as everything depends upon the length of the season, it were wiser perhaps to run no risk in the matter, by waiting until spring. This does not of course apply to plants raised in pots; these may be set out any time this month.

BLACKBERRIES.—Cut away the canes that have done bearing, also all the new canes, with the exception of three or four of the thriftiest looking, shortening these back to five and a half or six feet and the laterals to eighteen or twenty inches, as recommended last month.

RASPBERRIES.—Treat as recommended for blackberries, and apply a good dressing of fine stable manure.

Vineyards in the State of New York.

Information respecting the culture of grapes and making wines—Exhibits of a profitable business, &c.

The culture of grapes and manufacturing of wines have been profitable branches of industry in the state of New York since 1854. The vineyards have been healthy, yield good, markets favorable, and the steady increase of the business denotes a thrifty enterprise, with good prospects for the future.

There are ten thousand acres of land in the western part of New York state now engaged in the production of grapes, the yield being something near three thousand pounds of grapes to the acre, and prices range from four to ten cents per pound. Some of the grape growers are farmers that raise ordinary crops of cereals, making the grape-raising only a part of their business; others devote nearly all their attention to vineyards, or dealing in grape juice and making wines. Some of the growers sell table grapes at ten cents per pound, grape juice at thirty cents a gallon, and new wine at seventy cents per gallon. The wines when aged are sold in large quantities at one dollar a gallon, and finally retailed to the consumers at three or four times the original cost.

The kinds of grapes grown embrace a great variety of names, the principal kinds used here to make red wines being Isabella, Nortons, Virginia Seedlings, Clinton, and Concords, while the ones that are chiefly raised to make white wines include Catawba, Delaware, Iona, and Dianas.

Parties that contemplate raising grapes may derive some benefit from the following notes respecting the culture of vines and the circumstances attending the flourishing condition of grapes in certain localities.

The best vineyards in the state of New York might be enclosed in a circle of sixty miles in diameter in latitude 42° 30' north, and longitude 30° west of Washington, about fifty miles from Lake Ontario in the western part of the state.

The vineyards are situated mostly on the banks and in the vicinities of Lakes Keuka, Seneca, and Canandaigua, the great depth of those lakes being from three to four hundred feet, and their steep banks sloping, in some instances where grapes are grown, say 40 degrees.

The soil in some places is very stony; in other places gravel, stone, and sand or block shale compose the surface, and tracts of sandy loam are frequent and spacious. Most of the vines are grown along the banks of those lakes, and on the sunny side of hills, while occasionally some are grown in vales and

on the sides of hills that are not in the immediate vicinities of the lakes.

The lakes are presumed to have a healthy influence on the clearness and purity of the grape, which is an important requisite for good wine and a feature that cannot be attained in any and every locality. Certain districts will produce bright clear barley and others will not, and in like manner will certain localities produce better grapes than others.

The climate is changeable—mercury from 50 to 110 F. above zero in summer, and from 50 down to 10 below in winter, and in some instances the mercury changes 30 degrees in a day. Seldom have frosts between months of May and December, but have snow on the ground two-thirds of the time from December until March.

In planting vineyards the ground is prepared in the ordinary manner that it would be for grain crops. Vines a year old are selected from nurseries, and set out in rows similar in form to the planting of apple trees. The vines are placed eight feet apart in the rows, and the rows are six feet in distance from one to the other. The ground around and between the vines is cultivated in summer, and the work of pruning the vines and cutting the main stem five feet from the roots continues periodically while coming to maturity, and at certain seasons ever afterwards.

When the vines are two years old, wire fences are erected along in each row, and the vines entwined to the wires. The fence is built by driving down pickets or posts sixteen feet apart along each row of vines, the pickets being two feet in the ground and five feet above ground; then three wires (like telegraph wire in thickness) are fastened one above the other along the pickets; the lowest wire is 20 inches above the ground, the middle wire 24 inches above the lower one, and the top wire 24 inches above the middle one.

Vines will bear the third year after they are planted; and the attention given to pruning them and keeping the weeds out of them from time to time will reward the industry in their yield.

The vintage season commences here about the 20th of September and ends early in October. During this period the grapes are cut from the vines as they ripen, great care being taken to select the bunches of similar maturity. As they are gathered, some are sent in small boxes to market. Some are sold entirely to wine manufacturers, or they are pressed and the juice sold by measure, or the liquid is stored and sweetened with the finest sugar.

In America the grape and wine business is confined chiefly to California, Ohio, New York, North Carolina and Virginia. In some localities in these states the trade has been prosperous and in others unprofitable, but in western New York the vineyards have been on the increase, until the capital now employed is estimated at \$5,000,000. The various wine companies in Steuben and Yates counties are constantly increasing their manufactures of champagne or sparkling wines, white wines, and red wines; one company that used 50,000 lbs. of grapes in 1860, increased the consumption to 500,000 lbs. in 1864. The quality of the wines manufactured has been tested thoroughly by constant and extensive use, and the increased demand denotes their merit, while it might be added that a New York manufacturer received a high award for certain wines at the late Vienna Exhibition.

The culture of grapes in New York demonstrates that vineyards will flourish in a changeable climate, and the profit on a good grape crop is far more than that which is realized from ordinary cereal products, and land entirely unsuited for general agricultural purposes can be made very profitable, provided the climate is genial to the production of good grapes.

PURCELL.

Hammondsport, N. Y., 24th August, 1874.

The Largest Peach Farm in Western New York— Good Crop this Season.

A recent visit to the peach-orchards, covering over fifty acres of the farm of John K. Buell, in Perinton, is thus described by the *Rochester Democrat*. "There were three orchards visited. The first one had an ancient and neglected look. However, even in this orchard, the visitors found something to surprise them. It was the fact that many of the oldest trees bore a large burden of fruit. Passing through this the visitors found themselves in a tract of fourteen acres, on which stand some 2,500 trees, and nearly every one of these is loaded down with fruit. The peaches are mostly Hill's Chili, a late variety, which does not ripen till about the 20th of September. The yield will be simply enormous. The trees, all young and bright looking, are bent to the ground with the weight of their burden. They are all healthy, and no borer or moss seems to have affected more than half a dozen in the whole orchard. After hearing all the spring that the prospects of the peach crop in Western New York were totally destroyed, the visitors could hardly believe their eyes when they saw these thousands of trees, bent down with their delicious load. The splendid condition of this orchard may be, and undoubtedly is, owing in large measure to its situation. It is circled on the east, north and south by a belt of willows growing close, and thirty feet in height. A patch of forest shelters the orchard on the west, so that it is practically enclosed on all sides. The winds cannot touch it, blow from what quarter they may. The third orchard, of nearly the same size, lies at some distance and is sheltered on the north-east and south by a range of hills. It lies upon a slope, and is therefore fully exposed to the west winds. These seem to have done no harm, for the young trees are burdened with all the peaches their branches can sustain. The three orchards, covering over fifty acres of land as they do, number about 6,000 trees, and two-thirds of them will bear an average of three baskets each. Two years ago the entire crop netted \$5,000, and the trees then did not bear as well as the present season. The soil in all these orchards is a light, sandy one. The trees are planted fifteen by eighteen feet apart. No fertilizer has been used since they were set out. There is a little hollow running through one of the orchards in which the soil is clayey, and here the trees, although greener in foliage and stronger in growth, bear no fruit."

The Wild Plums of Kansas.

[Some time ago, it was stated that a traveller in Central America, while passing over the sandy plains of Kansas, met with dense thickets of small plum trees, not larger than our gooseberry bushes, bearing fruit of immense size and fine flavor. Several inquiries for further information respecting these plums not having met with any response, our occasional contributor, Mr. Jackson Gillbanks, who takes so active a part in all branches of natural history, wrote to America to ascertain whether or not such plums existed, as small bushes bearing large and delicious fruit would be a grand acquisition to both our gardens and orchard houses. This has produced the following interesting letter on the subject from Mr. L. D. Thompson, of Kansas.]

Lawrence, Kansas, U.S.A., July 3, 1874.

"Dear Sir:—Your letter relating to wild plums of the plains of Kansas, has again directed my attention to them. The head waters of the Kansas river, and many streams entering into the Platte, abound in wild plums of many varieties and colors, where the soil is fertile and water plentiful, the trees grow to the height of from 6 to 10 feet, and the fruit of many kinds is large and pleasant to the taste. There is one variety of white plum quite as large and of as good flavor as Bolman's Washington, a kind generally cultivated and much valued in the eastern states. Another kind resembles the St. Catherine in size and color. Among the sand hills of the Arkansas the trees do not reach the size that they do further north, being, in fact, mere bushes 3 and 4 feet high, growing in dense clumps or thickets. The fruit, however, appears to be equally large and luscious, and during the early fall my men have frequently brought baskets into camp, which were exceedingly palatable, either raw or cooked. In the fall of 1872, after we had experienced severe frosts upon the head waters of the Republican, on our way into settlements, upon the north ford of the Solomon, we found a deep arroyo, with a spring, whose sides were filled with plum trees in full bearing, their sheltered position having apparently delayed the fruitage and protected them from frost. I shall be this year south of the Arkansas river, in the extreme south-

western part of this state, and if the Indian's untutored mind does not suggest his raising my hair, I will make further observations upon this subject, the result of which I shall be happy to communicate. (Signed), EDWARD D. THOMPSON.—*The Gardener*.

Strawberry Culture.

R. L. Gazley, of Bridge-water, a very successful strawberry cultivator, sends us a box of specimens of twenty varieties of berries, which we have examined with interest. The specimens were for the most part in stocks and exhibited well the abilities of the different varieties, both in quality and quantity of product. Mr. Gazley believes that the Col. Cheeney variety crowds out Charles Downing and shows superior excellence. He places first in estimation the Col. Cheeney, the Agriculturist and the Fillmore. We quote the results of Mr. Gazley's experience for the benefit of our berry-growing readers. He says:—

The Fillmore bears the heaviest foliage and the strongest foot-stalks I ever saw. The green prolific is large and good and so is the Charles Downing. The Michigan and Boston pine resembles the Cheeney. The Jenny Lind in fruit resembles the Fillmore, but not in vine. Napoleon III, Triomphe de Gande, Juconda and Golden Queen resemble in some respects the fruit of the Agriculturist, but not the plant, that being very fine and with light-colored foliage. The Golden Queen grows very low, and bears a purple, delicious fruit. The Russel prolific and C. Downing are similar except in shape and fruit. The pine is similar to the Cheeney. All the above sorts, except Jenny Lind and Fillmore, are much larger, superior in flavor, more prolific, and more hardy, except the Napoleon and Golden Queen to the following:—

The Col. Wilder and the Nicanor are similar. The French is merely like Wilson's, except that it is earlier and sweeter than that noted variety. The Downer and Ida are too acid, but are prodigious bearers. The Royal Hautbois is peculiarly sweet, but it is fit only for the amateur grower. It has run itself into the ground. The Colfax is hardy and an abundant bearer, and will do for those who say they prefer field berries. Barnes' wammoth is large and good enough, but there are not enough of them. One row of this variety has stood three years between Fillmore and C. Downing, but now it must give place to its neighbors, for eleven hills or stools have produced only five foot stalks and but three berries. Gazley's seedling must leave next year if it does not improve in size and flavor. My thornless blackberry is hardy, a prodigious bearer; the fruit is small but long and almost sweet. My white blackberry has stood fifteen years' trial; it has a small spine, very light-colored wood, the fruit is long and sweet, but there is not enough of it. I shall try them longer. —*Utia Herald*.

Pond Mud and Strawberry Runners.

I have received so many useful hints from the "Notes of Observation" of you and your correspondents, that I am tempted to offer my contribution in the shape of a note on pond mud. Having let off a pond (made two years ago), I heaped it up by the sides, and wondered what would be the best use to turn it to. When it had lain a week and was solidified and plastic, I took some down to the strawberry beds, made a number of balls of it (about the size of a large apple), and went through the beds in no time, with my left hand "plumping" a ball down, with my right pushing a runner in to root upon it. It has answered exceedingly well, the runners rooting quickly, the mud retaining moisture most tenaciously, and patting from the ground with ease when you detach the runners to form new beds. I have also been using the mud for laying roses, carnations, &c., but of course cannot tell as yet how it will answer. The second use I have made of it is as an "aphis absorber." I take two *quarts* of it (of the size of, say, a sheep's kidney), one in either hand, and dab them simultaneously, of course—on either side of the infested shoot. The brutes stick to the clay, and, with a roll of the fingers and palm, are buried for ever in the mud. The shoot is not in the least hurt, and if the work is deftly done the clay penetrates to the minutest furrows of the leaf. More information is needed.—R. B. of B., in *The Gardener's Magazine*.

An English writer gives a plan for protecting all kinds of fruit from birds. It is simply crossing threads from twig to twig in various directions, so that birds will strike against them, when seeking the fruit. He says it never fails to scare them away.

THE VEGETABLE GARDEN.

Seasonable Notes.

CABBAGES AND CAULIFLOWERS should be hoed often, and if slugs or other insects appear, dust freely with lime. White hellebore and other active poisons should, for obvious reasons, be avoided as much as possible.

TOMATOES must be kept securely fastened to their trellises to prevent the fruit touching the ground. Trim off all superfluous branches, and if the large, green tomato-worm makes its appearance, destroy it at once, as it is capable of doing a vast amount of mischief in an incredibly short space of time.

CORN.—Select a few of the choicest ears for seed, and feed the stalks to cattle as soon as possible after the ears are removed. A few stalks of green, juicy corn in the evening will keep the "cud of contentment" moving all night.

CUCUMBERS.—Pick daily such as are of the proper size for pickling, reserving the larger sizes for cucumber-cat-up, or what is termed "sweet-pickles."

MELONS should be turned frequently, to ensure even ripening. When fully ripe they are easily detached from the stem. Gather in the morning before the sun has had time to heat the fruit.

ONIONS are ready for pulling as soon as the tops fall down. Dry in the sun and store away in a cool airy place.

REMEDY FOR CABBAGE WORMS.—Having noticed many inquiries, and among them that of C. H. D., in your issue of August 20, for a practical remedy for the cabbage worm; I would say that I have found that buckwheat flour, sifted through a sieve, early in the evening or in the morning while the dew is on, will effectually eradicate them. Two applications (and often one) will do the work. I have succeeded in raising splendid cabbages, while my neighbors, who did not use this remedy, have invariably failed. It is far preferable to hellebore, or any other article, for the purpose, and has the advantage of being harmless.—*Cor. Country Gentleman*.

VEGETABLE INSTINCT.—If a pail of water be placed within six inches of either side of the stem of a pumpkin or vegetable marrow, it will in the course of the night approach it, and be found in the morning with one of the leaves on the water. If a prop be placed within six inches of a convolvulus, or scarlet runner, it will find it, although the prop may be shifted daily. If after it has twined some distance up the prop, it be unwound and twined in the opposite direction, it will return to its original position or die in the attempt; yet notwithstanding, if two of the plants grow near to each other, and have no stake around which they can entwine, one of them will alter the direction of the spiral, and they will twine around each other.

A NEW TOMATO.—We are in receipt of a specimen of a new tomato brought before the public for the first time this year, says the *Detroit Tribune*, by our old and excellent friend John Ford, of Detroit. The quality of the fruit is superior to that of any early tomato with which we are acquainted. It grows very smooth, of fair size, and is entirely free from the hard, half-woody portions with which Hathaway and other early sorts are troubled. The fruit was shown to the members of the Wayne County Horticultural Society at their August meeting by whom it was carefully examined and named "Ford's Early Cluster." Mr. Ford stated that three years ago he noticed among some Trophy tomatoes a plant ripening earlier and loaded with fruit. He preserved the seeds separately, and planted them last season. The plant retained these characteristics fully, and so again the present year; and he feels sure it is a valuable addition to the list of tomatoes, ripening two weeks sooner than any other variety.

THE VEGETABLE MARROW AS A WINTER VEGETABLE.—Why do we only grow this really serviceable vegetable for summer consumption, and not seek to produce a crop for winter use? Is there a prejudice against it when in a ripe form, or does this negligence arise from that indifference for new things that is so much the characteristic of the English people? It took a long series of years to teach our ancestors the great value of the potato as an article for winter consumption, and now we realize its value in the greatest degree. It cannot, however, be denied

that we have in the potato an exceedingly uncertain crop—one on which no positive reliance can be placed, as a full and complete crop is now the exception, and possibly a very sparse crop may some day become the rule. The severe check that the potato has received during the last two years is, I fear, beginning to shake the confidence the growers had reposed in it; and should it at any time prove to be a general failure, it would not be merely a severe loss to the potato-growing community, but a heavy national misfortune also. To advise the cultivation of the marrow for the production of a winter crop is nothing new; but the advice is just as strongly needed now as it has ever been in days past, and although it would be absurd to suppose that we are having pretensions to fill the place now occupied by the potato yet it may well become a valuable adjunct to our somewhat sparse winter vegetable supply, as it is ridiculously easy of cultivation, easy to store, and as easy to cook.—*The Garden*, 1871.

THE FRENCH excel in producing perfect specimens of fruits and vegetables.

UNRIPE FRUIT is seized in Brooklyn. The policemen eat it, and the children are saved.

SETTING OUT CURRANTS.—A. S. Fuller says that currants do better transplanted in autumn than in spring, because the bushes commence growing so early, and the fruit matures soon in the summer. If transplanted early in autumn, they will produce some new roots before winter. For the same reason, it is the best time for planting cuttings. The season is now at hand.

SHADING GREENHOUSE.—Mrs. H. G. P., Norwich, N. Y., asks: "In washing or painting the glass of my greenhouse, shall it be done on the outside or inside, and what the material?"

[It is best to shade on the outside. It put on inside it is very hard to get off. Nothing has yet been found that is just the thing for shading, but on the whole, a thin paint of rye flour is the best. Things which stick on the glass well, are too hard to get off when the fall comes. Rye flour comes off gradually, and by fall is nearly all gone. Sometimes, after heavy rains, it may get thin, and a may be necessary to use it twice in one season.]—*The Garden*, 1871.

A BIG SUNFLOWER.—A day or two ago we were shown a sunflower plant on the premises of Mr. A. C. Moore, No. 427 Elk Street, which bids fair to rival anything in its line. This thrifty specimen of vegetation stands ten feet high, and its thick branches form a bush of nearly four feet in diameter. There are over fifty full-sized blossoms on it and others budding. The prodigy still grows. At the same time and place we saw innumerable specimens of rhubarb of a most extraordinary growth. One stalk measured a fraction over seven inches in circumference, while many others were kept at. Where are your agricultural fairs?—*Buffalo Ex.*

AN IMPORTANT FACT IN GRAPE CULTURE. We would mention a fact which has come within our observation and experience, which, if generally true, is of some importance. It is this: That the fruit bud from the base of the past year's cane throws out larger and better developed grapes than either the first or second. The grapes from these buds also seem better flavored, and generally superior to those on the first or second. In accordance with this hint we have adopted the plan of cutting the cane at such lengths as to leave the third bud generally, and sometimes the fourth when a good strong one, and then rubbing off the first and second buds, and leaving the third and fourth for fruit. The number of fruit buds left on the vine must depend on the age and strength of the vine. If the vines are strong and vigorous at three years, from two to three bunches of grapes may be allowed to mature on each without injury.—*Light House*, 1873.

VINES IN NOOKS.—Three vines of as many different varieties, planted in some sunny nook, or by the side of some building, so as to obtain shelter, will, if properly cared for, furnish many a bushel of delicious grapes every year. Make the ground mellow and rich by the use of a spade, and by employing old manure, finely ground bones and ashes, and set out the plants. In three years the rich clusters will appear, and in four years the product will be abundant. It is well to have vines planted so that the waste liquids from the dwellings can be used in fertilization. If there is any room the vine especially loves, it is the soapy liquids which accumulate on washing days in families. Vines drenched every week with these liquids will flourish astonishingly, and extend themselves so as to cover large buildings, every branch bearing fruit. We say to our readers, plant vines.—*Science of Health*.

THE FLOWER GARDEN.

Hardy Spring Flowering Bulbs.

Among Flora's treasures, bulbs as a group or class are one of the most interesting, as well for easy culture and almost universal adaptation as for their variety, profusion, and beauty of bloom. How admirable for gardens, greenhouses, business and living rooms. How refreshing to the sick, how useful to scholars. What a void they fill during winter and early spring. What exquisite living bouquets from such quaint, buddy flower-commons. There is not a home but may be lit up, not a soul but may be cheered with the beauty of bulb-growth and bloom. Love artificials? Yes, sure, to teach us to love the natural and their culture the more. Flowers, gems, all joy that earth affords, belonged to the people, especially to our (unrecognized partners and) successors. God's beloved women and children, with infinitely richer, world-condensing and illustrating common school gardens and museums, ever freest to the hungriest.

For the House.

Hyacinths, crocus, narcissus, and early tulpe are the best. For pot culture, the directions given for potting hyacinths will apply to the other sort of bulbs.

Soil and Site

A warm, sunny place is desirable. Hyacinths bloom well in almost any plant-loving situation, with free light, soil, air, moisture and care. The Holland bulb-soil is a fine, moist, old ocean-bed sand, much of it scarce two feet above the water level. Elsewhere a common well-drained garden soil answers well. Those who would improve their natural soil for bulbs may take off four to six inches of surface and spade deeply the remaining soil. Then fill up the bed with an inch or two of surface leaf-mould and soil from the woods. This soil is the special delight of lilies. For spring-flowering bulbs, hyacinths, tulips, crocus, etc., add a good coat of well-rotted manure—the books say cow manure—and mix, spade or fork thoroughly together. Where leaf-mould cannot be had, use rotten manure, peat or turf.

On the Lawn.

Remove the turf and place the bulbs three or four inches deep, pressing down the turf firmly with your foot. Cutting off the foliage with a scythe will not injure them, and they will often last for years. Snowdrops can be planted the same way. Lilies are domestic ornaments for the lawn.

Plant in Autumn.

Hardy bulbs, to do well, must be planted in fall, not in spring. From October to December is the best time, though later will do if the bulbs are sound and well cared for. If your soil is not sandy, in garden planting cover the bulbs with sand.

Depth.

In heavy or ordinary soils, measuring from top of bulb, set anemone and ranunculus one inch, crocus, scillas, iris, snowdrops, hardy gladiolus, and such small sized bulbs about two inches; tulips, jonquils, narcissus, double and single, three inches, hyacinths, strong growing lilies, peonies, etc. four inches, crown imperials and polyanthus narcissus, five inches. In light soil small bulbs will bear deeper setting.

Distance Apart

Bulb beds may be three or three and one half feet wide. Set medium and small sized bulbs in lines six to twelve inches apart, and two to six inches apart in the lines. For larger bulbs, lilies, etc., the lines should be fourteen to eighteen inches apart.

In groups or clumps of say three bulbs in each, set the small or medium sized bulbs six inches apart, in a triangle, the groups a foot apart, with one sort or color in each and unlike its next neighbor, the effect is fine.

In the flower border, along the edge plant crocus, snowdrops and the dwarf scillas in clumps six to twelve inches apart, filling the border with hyacinths, tulips, narcissus, lilies, etc. Hyacinths in masses in beds or ribands in borders, with their colors, red, white, and blue separate, have a fine effect.

Over Winter

To keep out the mice and severe changes, let the ground freeze an inch or two and then cover the bed with old manure, hay or straw (free from weed seeds,) say four inches deep. Excessive covering may heat and rot the bulbs. Early in spring, as the bulbs begin to shoot, remove the covering.

No weeds should be tolerated among growing bulbs.

After flowering, as the foliage turns yellow, cut off the tops, take up the bulbs, spread out a few days in

a dry, airy, shady place, to ripen off, and then pack away in dry sand or in parcels, in a dry, shady, frostless place until wanted.

If not desirable to remove bulbs annually, they may be left in favorable locations two or three years, planting the ground after the flower stems are removed, to roses, verbenas, geraniums, and other bedders, or sowed to portulaccas and other quick growing annuals. But the annual arrangement is the better.—*Phoenix's Catalogue*.

Adam's Needle—*Yucca Filamentosa*.

Among the many interesting plants cultivated in the grounds of Peter Jack, Esq., at Bellahill, we notice the *Yucca filamentosa*, which is now in full flower. It is not known to have blossomed before in this Province, and has in fact been usually grown under glass, but having withstood the unusually severe winter of 1873-4 without the slightest protection, we may now safely add it to our list of hardy plants.

The *Yucca filamentosa* is in several respects a remarkable plant. It is not exactly a herbaceous plant, because it has a permanent stem like a tree or shrub, but it is also very unlike a shrub, for this stem is so extremely short as scarcely to rise above the surface of the ground. When not in flower the plant seems to consist simply of a rosette, of numerous long lance shaped pointed leaves, which have loose threads like manilla fibre hanging from their margins. From the centre of the leaves the flower-stem arises, branched like a candelabrum, to the height of three or four feet, and each branch bears six or seven campanulate flowers of a beautiful creamy white color, which have been likened to sleigh-bells. There will be about seventy of these flowers on the Bellahill plant when all the buds have opened.

This *Yucca* was originally a native of Virginia, was described by Linnaeus as *Yucca filamentosa*, on account of the threads or filaments on its leaves, and was introduced into Eng and so long ago as 1675. It thrives well there in warm situations, but is more extensively cultivated in the United States, where it forms a noble lawn plant, stately and ornamental in its leaves as well as its flowers. It is figured in the *Botanical Magazine*, the great repository of plant drawings, table 900.

The individual we have described was originally brought from the United States we believe by Alderman Barron, who, after cultivating it for some years, handed it over to Mr. Jack for experiment. He planted it on his lawn, in a north-easterly exposure, and gave it a rich soil but no particular care. The result has been successful, and everybody now knows that *Yucca filamentosa* is a hardy plant, of easy cultivation, noble habit and graceful mien, and within the reach of every horticulturist who has seventy-five cents or a dollar in his pocket.—*Nova Scotia Journal of Agriculture*.

MILDEW ON ROSES.—Carbolic soap and water is recommended to destroy mildew on roses, to be applied by sprinkling.

LILAC DR. LINDLEY.—This is by far the best addition which has been made of late years to our hardy forcing shrubs. Here we have a sort that will in a short time supersede the French production in the way of white lilac, since it sets its buds as small plants and opens freely, while the French plants are large before fit for forcing. We have some plants eighteen inches high, with a dozen clusters of bloom, and if forced in a shady house, it comes a good white. When it is more plentiful and the plant gets up to say three feet or so in height, there will be no more showy plant for a greenhouse.—*The Florist*.

CUTTING FLOWERS.—Never cut flowers during intense sunshine, nor keep them exposed to the sun or wind. Do not collect them in large bundles, or tie them together, as this hastens their decay. Do not pull them, but cut them cleanly off the plant with a sharp knife—not with scissors. When taken in-doors place them in the shade, and reduce them to the required length of stalk with a sharp knife, by which the tubes, through which they draw up the water, is permitted to ascend freely; whereas, if the stems are bruised or lacerated, the pores are closed up. Use pure water to set them in, or pure white sand in a state of saturation, sticking the ends of the stalks into it, but not in a crowded manner. If in water alone, it ought to be changed daily, and a thin slice should be cut off the ends of the stalks at every change of water.

Poultry Yard.

Poultry Notes.—No. 18.

A Negative Standard of Excellence.

In our last paper we noticed that Mr. Wright had given to the public a new standard of excellence, original in its inception and in the mode of arriving at the excellences of exhibition prize birds. Carrying out the idea adopted by him in his work on the brahma fowl, of taking one hundred as the total numerical value of the standard of perfection, and adding another five in case of extraordinary size, he then proceeds to give, not as in previously published standards, the value of each fancy point of the fowls, the whole of which when summed up would make the total of perfection, but the value to be placed on points of defect only in the bird, the sum of which, taken from the total of one hundred, would leave the actual value of the fancy points just as would the sum of the fancy points by the other standards of excellence indicate its nearness to perfection. Mr. Wright, by a negative process of reasoning, arrives at the same conclusion that the American standard does by a positive. In support of the course taken by him, Mr. Wright says: "In comparing these two scales, the first general question that arises is regarding the best standard total for the value of points, (he is alluding to the scales of points as applied to coxins). Any one who tests the total of fifteen points before the actual pens, will soon find it inadequate, but this does not decide the point we are considering, which really is whether as small a number as possible, in which the least important points are represented by unity, shall be chosen, or the higher number of the American fanciers. A small number has the advantage of simplicity, and hence apparent quickness of application, but it fails in *elasticity*, and therefore in accuracy. It is, in fact, absolutely incapable of being applied at all. Taking, for example, the series of points—head and comb, carriage of wings, legs, and fluff, which are each represented by unity in Mr. Tegetmeier's scale (Poultry Club), is it conceivable that such representation might give with approximate accuracy their comparative value as related to each other and to the more important points, in forming a general idea of the merits of a bird. But if it is pretended to estimate the rank of a bird by really adding up the points, and giving the award to the one which carries the highest number, such a scale must fail; for it can but very rarely happen that head and comb will be either so perfect as fully to deserve the ideal estimate, or so bad as fairly to lose all their value in competition. *Partial excellence or failure is the rule*; and in such cases a scale based on unity could only be applied by the expedient of deducting what we may call a *portion of a point* from such as require it, as by allotting either two or three points in the total to the four we have been now considering. Such a process is necessarily too rough to be worth much in its results, and it is a simple fact, that in spite of the recent amusing assertion of its editor that the points of excellence in the English scale, 'have been so generally agreed upon by the exhibitors and judges' (whatever the definite article may mean), and in spite also of the good we have gladly admitted to have been done by it in some respects, there is not a single acknowledged judge in England who professes that his awards are even intended to be generally in accord with the 'standard of excellence,' or a skilled fancier who pretends to breed to it. No doubt this is partly owing to actual error in the scales; but much of it is due to the fault, inherent in any small scale system, which we have been considering, and which we regard as fatal. On the other hand, a scale which allows to the least important points a numerical value of say four or five, is at least free from this defect. If a perfect comb is to count five, the judge may deduct for

partial faults either one or more, or the whole points for it, according to his estimate of the amount of defect. And although we have freely admitted that no good judge will ever, unless in very rare cases, attempt actually to add up the points in making his awards, still, as he insensibly acts according to real though not actually reasoned out canons which govern his decisions, if these are to be tabulated at all, it should be done in such a way as adequately to represent what is intended. We think, therefore, that in this respect American fanciers have decided wisely, and for these practical reasons, as well as such as are connected with decimal and other properties, the number one hundred combines the greatest advantages of any which could be chosen." Taking as a test the breed of coxins, Mr. Wright shows that the standard of the Poultry Club is inadequate and faulty. First, "in not giving enough weight to general symmetry or coxin proportion, and second, more especially taking no note whatever of the most important coxin 'points' of saddle or cushion." A very popular and excellent judge of poultry in England is Mr. Hewitt, and on being asked his opinion respecting a fixed scale of points, he replied to Mr. Wright as follows. "Circumstances are constantly arising which bear very strongly against fixed points, to wit, I have seen some of the very best birds so worn out in condition (from over showing) that no one could conscientiously give them any notice, yet the best in all other points. Of these one died during the show, the remaining two followed suit, one in a week, the other about three weeks and a half afterwards." "Now," says Mr. Wright "this remark is perfectly just, for it is obvious that to lose ten points for want of condition would by no means meet the case here supposed, and which had been omitted by us, as by others, on the ground that it was too obvious to need tabulation. On its being thus mentioned, however, by such an authority, we felt that such a ground of omission was untenable; but when we proceeded to add to the table of defects an item for such utter loss of condition as had been spoken of, it became evident that the whole system of tabulating excellences was fundamentally wrong, and that a plan which had occurred to us some years since, of valuing defects *solely*, offered the only sound basis for a table of points. Judging *really* is, in fact, a question more of defects than of excellences, since without some general approach to excellence no bird can have any place in a good class. Such a plan also meets another difficulty, which in forming our own scales we had encountered again and again, and which consists in the fact that the number of points given to one feature, while as much as could be allotted consistently with the *proportionate value of other individual points*, were often not enough compared with the *total value of a perfect bird*. The difficulty arises from the necessity of not only making the values of various points proportionate with each other, but of keeping the total *within the ideal number*. On the other hand, by starting from the standard or highest value, and simply deducting what may be necessary, we are free from this necessity; we are no longer obliged to keep the sum of our points within our ideal of perfect number, but can give them what weight we find necessary as compared with that number, as well as compared with each other, and hence, if only our calculations are correct, ought to be able to meet nearly if not quite every case that can occur. Using no false mask," he continues, "of 'authority,' we present them avowedly as our own, on their own merits, with the remark that they do not in some points represent what we think ought to be the standard, or seek to lead the judges to views of our own, but are simply an attempt to follow them, and tabulate and translate their views, as consolidated, not by argument or 'conventions' but by competition and experience on the show ground. In some points we would wish values to be otherwise; but we have found the figures which would represent these

wishes so constantly over-ruled, that we have been forced to modify them. We do not for a moment pretend that errors may not be discovered and pointed out, but we have a very strong confidence that if the scales now presented be tested patiently on the show ground, or in the fancier's yard, they will be found to pronounce with singular accuracy the merits of birds as estimated by the best English authorities. It is thus they should be judged. So different are 'ideas' or 'parlor work' to the teaching of actual competition, that a really correct scale will, until tested, often appear actually absurd. But let the reader select from our schedules that for any breed which he thoroughly understands,—let him take that schedule, and that only, and before a number of *his* test it by the awards of proved and skilful judges, and we believe he will find that both their successes, and if they have made any—equally their mistakes, will give to our figures an emphatic endorsement which no others will be able to claim. The plan we have thus adopted may by some be thought less simple than the other. We can only reply, first, that simplicity which stands in the way of accuracy is not a benefit, and, secondly, that this difference will be found to be more in appearance than reality. We do not wish any judge to 'work by book,' but rather have attempted to tabulate in such a form as can be studied at leisure the reasons of correct decisions, and to supply means for forecasting them, or to check erroneous ones. Hence accuracy is all important, while at the same time it will be found that the very details of our tables make them really easier of application than simpler because looser figures can ever be."

We have thus fully given Mr. Wright's views in his own words for the introduction of a new "standard," because we think many of our breeders and judges will do well to study his schedules, which are very full and contain much information.

Dark Brahmas.

Much has been said lately about this useful and popular fowl. My opinion is that there is not a more thoroughly useful towt in existence. As a proof of what I state, allow me to make a few remarks.

A friend of mine who is quite well known as a brahma breeder, has this year reared sixty-one chickens. The first brood consisted of eleven from eleven eggs, turning out to be six cockerels and five pullets, this lot of chicks were sixteen weeks old on May 31st, and on that day a pair (cockerel and pullet) weighed exactly eleven pounds. Three of the five pullets commenced laying at fifteen weeks old, and laid nine eggs during the last week. These two facts are quite sufficient to prove the qualities of the brahma, not only as a rapidly growing bird, but also as a good layer. Some of your readers, perhaps, may say, "Ah! but this is only a solitary instance." In answer to that, I state the following: The same breeder's birds in 1871 commenced laying at seventeen weeks old. In 1872 the pullets commenced laying at sixteen weeks, and this year a week in advance. The gentleman to whom I allude is Mr. W. Mansfield, of Cambridge, and I have no doubt that the forward condition of his birds is simply due to the high feeding and good attention which they receive at his hands.

A few more remarks and I have done. No man can breed good fowls without care and trouble, but to be really successful he must have a knowledge of the habits and wants of the variety he cultivates, which takes a long time to acquire. I have bred different varieties, but have found the brahma equal, if not superior to all.—F. W. Metcalf, in London Field.

PRESERVING EGGS.—The following receipt from Wright's "Poultry Book" is recommended very highly:—To four gallons of boiling water add half a peck of new lime, stirring it some little time. When cold, remove any hard lumps with a coarse sieve, add ten ounces of salt, three ounces cream of tartar, and mix thoroughly. The mixture is then to stand a fortnight before using. The eggs are to be packed as closely as possible, and to be kept closely covered up. If put in when new-laid they will keep nine months.

Breeder and Grazier.

Murder of the Faithful.

A Word to Grooms and Stablemen on Feet Air that Horses are Needlessly Forced to Breathe

There are so many stables in existence and long constructed without the slightest reference to the comfort of the horse in regard to the most vital of his necessities, the air he breathes, that we would be obliged if you would give place in your columns for a few facts that are known to almost every intelligent man, so far as they affect them, but which are never thought of as equally affecting God's most useful gift to mankind, the horse.

Air is taken into the lungs, and the oxygen absorbed by them to generate animal heat, and then expelled. This is done to relieve the organs of the body of the old worn-out and useless particles of matter. At every inspiration a portion of the oxygen in the air is absorbed by the lungs to purify the blood. The amount varies somewhat, being greater when the temperature is low than when it is high.

In the mutual action between the air and the blood, in a horse, in twenty-four hours the air loses two hundred and fifty ounces of oxygen, and receives from the blood one hundred ounces of carbonic acid. Whenever the blood is presented to the air in the lungs the oxygen leaves the air and is absorbed by the blood, and when the carbonic acid or poison in the blood comes in contact with the air in the lungs, it leaves the blood and unites with the air.

In this way the blood is relieved of its impurities and becomes pure, which is the essential principle of life. Oxygen is also received into the blood through the skin. Carbonic acid is also expelled from the skin into the air. For a horse to enjoy good health in the highest degree it is necessary that the impure or venous blood be properly changed. This is effected in the lungs by the action of the air. Therefore it follows that the elements when breathed should be pure, or contain twenty-one per cent. of oxygen and seventy-one per cent. of nitrogen.

The volume of air expelled from the lungs is somewhat less than that which is taken in. The quality and purity of the air is affected by every breath, the quantity of oxygen diminished, the amount of carbonic acid increased. Of the twenty-one parts of oxygen in the inspired air eighteen parts only are expelled. If one-fourth part of the volume of air received into the lungs is decomposed at one beat of the heart it might be supposed that if the expired air be again received into the lungs one-half the oxygen would be consumed.

But it does not follow if the air is thus re-breathed that the same changes will be effected in the lungs, for air that has been inspired does not part with its remaining oxygen as freely as when it contains the proper amount of life-sustaining element, and thus the changes in the impure blood but imperfectly take place. Pure atmospheric air is best adapted to a healthy action of the animal system.

As air cannot be maintained pure under all circumstances, the question may be asked to what degree may the air be vitiated and still sustain life. A high authority says that air with more than five per cent. of carbonic acid is unfit for respiration, and as air once breathed contains over eight per cent. of carbonic acid, it clearly shows that it is unfit to be breathed again.

A horse in a state of rest inhales sixty-five cubic feet of air per minute. There is necessity for the presence of fifteen to twenty times the amount of pure air actually taken into the lungs, from the circumstance that the expired air mixes with and vitiates the surrounding air that has not been inhaled. Horses that are active require more air than those that are idle, because the waste of the system is greater.

A horse that has been in the country or in the open air suffers more when placed in a small or badly-ventilated stable than one that is accustomed to confinement. In crowded stables which are not ventilated, the air is vitiated, not only by the abstraction of the oxygen from the air, but by excretions from the skin and manure.

Air that has become impure from the abstraction of oxygen and the excess of carbonic acid expelled from the lungs, and from the excretions from the skin and manure, have a deleterious effect on the body of the horse, and prevents change in the blood. For this reason pure air should be freely and constantly admitted into stables, and the vitiated air permitted to escape.

This is of greater importance than warming. Plenty of oxygen taken into the lungs in pure air generates animal heat. On entering a badly-venti-

lated stable of a morning, where a large number of horses are crowded together, the groom throws wide open the doors for a while to admit fresh air before he can endure the impure atmosphere. The foul and impure air is stilling to him. What, then, must the poor dumb beasts suffer who are confined in such an atmosphere?

Stables constructed with a view to security rather than to ventilation, and usually are imperfectly aired. Nine out of ten of the larger livery stables, when closed for the night, have not an opening on the first floor large enough to admit a man's head, let alone any of God's pure air. On the upper floors there is not the same attempt at security from without, and here there is generally a better admission of air.

The effect of pure air on the health of horses was clearly shown during the epidemic last year. The horses in the badly-ventilated first floors were generally affected more than those in upper storeys. Horses confined in stables not well ventilated have their lives shortened and the seeds sown for lung diseases and other maladies as fatal. Animals that breathe vitiated air very generally have tubercles. The purity of the blood is influenced by the condition of the lungs. When the air cells of the lungs have become partially impervious to air from the pressure upon the lungs of carbonic acid the blood will not be purified even if the air is pure.

In the Black Hole of Calcutta one hundred and forty-six Englishmen were shut up in a room eighteen feet square, with only two small windows on the same side to admit air. They were there ten hours after their imprisonment only twenty three were alive; the others had died from breathing impure air. The twenty three who escaped were soon attacked with inflammation of the lungs, caused by breathing vitiated air. In the majority of stables, every fifteen by twenty feet is occupied by five horses. These five horses require as much pure air as thirty-five men.

Confine thirty-five men in a room, fifteen by twenty feet, over night with only a little pure air in proportion as is usually admitted to these five horses, and what would be the consequence? Every man would be sick and faint to prostration. What then must the faithful, noble horse endure? And what must be the aggravated suffering of these poor creatures who are in the middle of long lines of stalls in large livery stables, where only a few breaths of air are admitted around the cracks and crevices of the doors.

By the time this air has passed a half-dozen horses nearest the entrance, the oxygen is so thoroughly absorbed, the proportion of carbonic acid so great, and the air so used up that it is completely vitiated before it reaches the poor creatures at a short distance. In burning wood, coal, &c., the oxygen of the air unites with the flame and produces heat. So in the animal, the oxygen is consumed in the lungs and assists in producing animal heat.

Those horses always in the open air and exposed to all weather consume so large a proportion of pure air, that, without artificial covering even in a state of inactivity they are enabled to resist a great degree of cold, owing to the production of animal heat by the oxygen of the fresh air they breathe. In crossing the American plains between Missouri and New Mexico, we saw large Missouri mules that had never been under shelter, and among three hundred there were many that had been crossing and recrossing the plains twice each year for twenty-five years, and were still apparently as strong and useful as any that had been more recently taken from breeding farms.

Among the Indian ponies it is not unusual for warriors to show captures made over twenty winters previous, that were matured when taken and still good. The squaw ponies, or those used by the squaws in packing the tent poles from place to place, are often very old but still useful animals. There is no doubt that these Indian ponies, exposed and ill-used as they are, live much longer lives than our domestic horses. There is equally little doubt that their longevity is promoted by the abundance of oxygen in the pure air they breathe.

A great mistake is made by our grooms in keeping fresh air out of stables, under the mistaken impression that they are adding to the comfort and warmth of the horses.

During the winter season, and especially where horses are blanketed, the temperature of a stable should never by artificial means be kept above forty-five degrees Fahrenheit, or less than half of the temperature of the blood of the horse. The groom should bear in mind that the lower the temperature the greater the consumption of oxygen, and the greater the production of animal heat.

It is not well to have a horse in a draft, but a

draft with plenty of air is better for him than foul, used up, poisonous air. If we take the animal from a state of nature and deprive him of the pure air that God intended him to breathe, let us show too much humanity to willingly cause one of mankind's greatest helps to suffer needlessly.

Let some of our gentlemen who stable at ill-ventilated livery stables (or small private stables, for there are plenty of them as bad) visit their horses after midnight, or in the morning early before the arrival of the groom, and see how painful to breathe and standing to themselves is the air their favorites are forced to endure. The most that we can do for the horse is at best but a poor return for his faithfulness to us. Let us then look more to his comfort, and spare him suffering where we can.—*Turf, Field and Farm.*

Keeping Pumpkins for Stock.

In answer to a correspondent, who says he will have a good many pumpkins this season but does not know how best to save them for feeding stock, the *Western Rural* remarks:—

If you have a barn collar, you may save them without difficulty, until about the first of January, by making scaffolds one above the other, three feet apart, and filling them with the pumpkins. If there is danger of freezing, they may be covered thickly with hay at the front and top. Those intended for feeding early, or before severe freezing weather, may be piled where they will not get wet, and put where they may be protected with litter and corn-stalks, to prevent ordinary frost from injuring them.

We should prefer liberal feeding during the fall, rather than attempting to keep them far into the winter. They are not only valuable for feeding milk cows and fattening stock, but for fall feeding; boiled and thickened with meal, are the best feed for swine of any we have ever used.

There is always a demand for the seeds at fair rates. Last spring they were scarce, and seedsmen charged high prices. They will undoubtedly be so next spring. As the seeds are injurious to any stock if fed in large quantities, you will have a two-fold inducement this season for saving the seed.

The seeds are most easily saved by splitting the pumpkins and scraping out the seeds. Separate them from the stringy integument as much as possible, and dry them by the most convenient method. An ordinary fruit-drying house with a heat of not more than 130° is excellent. If you have a smoke-house you may easily arrange this for the purpose, being careful not to smoke and thus discolor the seeds. This discoloration will not impair the seeds for planting, but unless they are perfectly bright, you will find difficulty in selling them.

After they are dry, a slight rubbing in sacks, and subsequent winnowing will fit them for market. If the price at which they are selling does not suit you one year, they may be safely kept; indeed at three or four years old, they are better for planting than at one year old; and kept dry and from the air, they remain good for years.

Raising Calves.

The following is the manner of raising calves practised at Shaker village, Merrimac county, U. H. S. and communicated to the *Country Gentleman*:—

We take pleasure in forwarding to you our manner of raising calves, hoping that the information may prove useful to all who are interested. We take the calves from the cows when six days old, and feed them on two quarts of new milk three times a day, until they are four weeks old. The fifth week we gradually reduce the quantity of new milk and add skimmed milk, increasing the quantity by the close of the week, to three quarts at a feeding. All the new milk given to the calves should be taken from their mothers.

From the time they are five weeks until they are three months old they are fed on porridge prepared as follows:—half a pint of oat-meal, one gill of cracked wheat, boiled one hour in six quarts of water; in cool weather a day's allowance may be cooked at a time. To two quarts of this add two quarts of skimmed milk, making four quarts three times a day. The milk should be gently warmed to about the temperature of new milk, taking care not to scald it, as it will produce colic. If calves incline to scour, one or two raw eggs beat in their milk will generally effect a cure. We give four quarts of the mixture at a feeding until they are ten weeks old, then gradually diminish the quantity during the next two weeks, when they are weaned and turned out to pasture.

From the time they enter the feeding pens until they leave for the pasture, there is constantly kept by them a supply of roots—beets or potatoes, cut into long thin slices. We prefer beets, as they prove to be the most nutritious. When grass cannot be procured, there should be a cribful of early-cut or second-crop hay kept by them. The pens should be kept clean and dry; to do this, they must be cleaned and new bedding put in every day. The calves you saw when in our place show the success of our plan of feeding. When eleven weeks old, their average weight was two hundred and thirty pounds.

Cure for Itching Manes and Tails.

A correspondent of the *Rural New Yorker*, who has tried the various remedies for horses rubbing their tails, gives the following, which we know to be good when the rubbing is produced by mere local causes connected with the skin:

Without attempting to convince the reader of the cause of itching manes and tails, or to persuade those who believe no remedy is good, without it is a compound of many ingredients difficult to obtain and more difficult to apply, I give the remedy and the manner of its application, and verily believe that many a horse owner will be pleased with the result when he has tried its merits.

Take common kerosene and put in a spring bottom tin can, such as can be found in the tool box of every mowing or reaping machine, on any carpenter's bench or at any hardware store: take the itching tail in one hand and raise it by the long hair, so that the small end of the dock will be the highest; then squirt the kerosene on the end of the dock. In a very brief time it will be spread evenly all over the tail. Then part the mane, if also diseased, and put the kerosene along the whole length. A small quantity will do, as it spreads readily and will reach every spot. The kerosene will dry off in a day or two and will do no harm, even if the parts are not washed. This, however, all careful horsemen will do as a matter of neatness, though it is not necessary, and the tail will look no worse than if no application had been made. One or two applications were in every case, in my experience, either cured, or at least have been attended with very satisfactory results.

WE LOSE a great deal by feeding hogs in the open fields, after fall rains set in and make a perfect quagmire of the feeding place. It would be money saved if a different course was adopted, and the hogs could be properly housed and fed on clean, dry floors.

SUGAR BEETS FOR PIGS.—Jonathan Talcott states that a Suffolk pig was fed on boiled sugar beets three times a day, from August 16th to October 1st, during which time his weight increased from 360 to 450 pounds; the gain during September being 60 pounds.

CURE FOR HYDROPHOBIA.—A German forest-keeper 82 years of age, not wishing to carry to the grave with him an important secret, has published in the *Leipzig Journal* a recipe he has used for 50 years, and which he says has saved several men and a great number of animals from a horrible death by hydrophobia. The bite must be bathed as soon as possible with warm vinegar and water, and, when this has dried, a few drops of muriatic acid poured upon the wound will destroy the poison of the saliva, and relieve the patient from all present or future danger.

FISTULA, OR POLE EVIL.—The *Tribune* gives the following: Forty grains iodine, 20 drops oil cedar, 30 drops oil sassafras, 50 drops spirits turpentine, 1 ounce gum euphorbium, ½ ounce Spanish flies; cut the iodine with alcohol; mix all together; then stir in hog's lard to the desired thickness. Then cut away the hair over the swelling with sharp scissors for some inches around, even if it has gone into a running ulcer, and spread the salve with a small mop. Every second or third day, wash off clean with strong soapsuds, and repeat the application. A permanent cure may be expected in a short time, unless the treatment has been too long deferred.

MR. BLOOMFIELD, veterinary surgeon, informs the *Meaford Monitor* that a peculiar disease is now attacking the horses in this and the adjacent township of Sydenham. About twenty cases have occurred, and wherever the disease is neglected it has proved fatal. We notice by our exchanges that a similar affection is prevalent among horses in other parts of the Province. Dr. Bloomfield advises that farmers and owners of horses should be on the watch for the first appearance of the disease, and lose no time in getting a remedy. He recommends that occasional doses of medicine be given to purify the blood and keep the system cool, and says that horses thus treated will be less liable to take the disease than if they received no proper attention.

The Apiary.

A Disappointed Bee-Keeper.

A correspondent of the *New York Tribune* gives his experience of bee-keeping in the following dolorous communication:—

"Eight years since, when I began farming, deceived by the stories I had heard of the enormous profits to be made from bee-keeping, I purchased four skips of common bees of a neighbor, and three skips of Italians of Mr. Quimby, in movable comb hives. I constructed a number of Langstroth hives, and in due time divided my Italians, and as the black bees swarmed put in the new swarms into the Langstroth hives. I made a bee hat, and rolled up a quantity of tobacco in old muslin. I frequently examined the bees in the frames, by first partly stupefying them by blowing smoke from the rolled tobacco into the hives, and then lifting the lids. The common hives I left alone. On the approach of winter the hives were scarcely half-filled, and not a drop of honey was in the boxes. I made a room in the cellar, where I deposited them. The next spring all the honey was consumed, and but three living swarms were left, the combs were moldy. At the beginning of the next winter I had four living swarms, which by purchase I increased to six. I left them on the stands all winter and in spring five weakly swarms were living. Hoping to obtain some surplus honey, I did not allow them to swarm; but not an ounce did they give me. Thus for five years I continued giving them constant attention, without receiving any surplus, and generally in the winter losing all the increase of the swarms. That fall I had three weak swarms left, to which I applied the match, obtained a few pounds of honey, and abandoned the business in disgust. In certain favored localities bees may be made profitable; but that they, on the majority of farms, can be made as profitable as certain vendors of patent hives try to make us believe, I absolutely deny. Like everything else, they are attended with great risk. There is no royal road to wealth. One thing well tended is better than twenty half tended."

The above narration is a very suggestive one, and a few comments upon it may prevent others from becoming similarly disgusted with an important and profitable branch of rural industry.

In the first place, it is a proof of reprehensible gullibility for any man to be "deceived" into bee-keeping by the lure of "enormous profits." It is only speculative lines of business that ever pay enormously, and the instances of wonderful success are the exception and not the rule. For one who makes a fortune by speculation, there are dozens if not hundreds who lose fortunes in that way. The pursuits of honest industry are worthy of being followed, if they pay fair profits on capital and labor. This they usually do. Something is hazarded in every undertaking, but as a general rule, the investment of capital and the bestowal of labor in industrial pursuits, proves remunerative. Hence men are encouraged to persevere in these directions, notwithstanding occasional and exceptional drawbacks and losses. Bee-keeping belongs to that class of human occupations which promise fairly paying returns for the money and time embarked in them. This is the representation uniformly made of it by all intelligent and practised apiarians, who with one voice are prepared to warn beginners against the expectation of "enormous profits."

Furthermore, bee-keeping requires to be learnt. It is both a science and an art, and no one need anticipate success in it, who does not acquire a competent knowledge of the business. The *Tribune's* correspondent does not tell us what means he took to qualify himself for the task he undertook. He bought four common hives of bees and three Italians to begin with. This was a very risky thing to do. A beginner should not attempt to manage more than one stock the first season. If he will thoroughly attend to that, and take every opportunity of making himself familiar with the habits and wants of the busy little workers, he may, by and bye, venture to

keep more. In bee-keeping, as in every thing else, it is well to heed the couplet.

"Little by little must I open my store,
Larger and larger my venture will be."

Our disappointed apiarian does not inform us what system of management he pursued. He got a bee hat, a very wise precaution, he smoked the bees with tobacco fumes, which was very foolish, as they stupefy the bees, instead of tanning them; and he "lifted the lids," a necessary step in order to examine the interiors of the hives and perform the requisite operations there but whether he did anything after the lids were lifted, and if so, what, he does not tell us. We suspect that, like many more who try bee-keeping for a little while only to abandon and speak ill of it, he supposed the bees would take care of themselves, leaving him nothing to do but watch their movements, and pocket the "enormous profits" of the business. His ignorance and incompetence are sufficiently evinced by his winter mismanagement. The bees were stowed away with a meagre supply of honey, owing probably to over-multiplication of stocks. They do not appear to have been artificially fed, a most essential precaution when the store of food is insufficient. Had he known enough to feed his stocks that first winter, they might all have been kept alive and vigorous, in which case, the second season would have had a very different record, and a prosperous apiary might have existed where now a few deserted hives, redolent of sulphur, proclaim the owner's incompetence and failure. No wonder the business was abandoned in disgust. But the "disgust" ought to be awakened in view of the want of common-sense and practical skill painfully conspicuous throughout the whole affair. Let no one think these strictures unnecessarily severe. Only failure can be looked for under such circumstances, and it is too bad that an important industry capable of bringing in millions of national wealth every year should be brought into disrepute, by the negligence and incapacity of people who undertake a task they do not know how to perform, or as the Westerners forcibly express it, "fence it more land than they can till." We have a shrewd suspicion that our disappointed friend is inwardly conscious his failure is largely his own fault, from his concluding reflection, "one thing well tended is better than twenty half-tended." To which we beg to add, that twenty things well tended are twenty times better than only one thing well tended. A system of farming such as is known by the name of "mixed husbandry," including the culture of grain, stock-raising, fruit-growing, dairying, poultry breeding, and, last but not least, bee-keeping, is in the majority of cases the wisest one to pursue. If several branches of profitable rural industry are kept going, it is not likely all will fail. The season that is bad for one branch will be good for another, and thus, from year to year, the operations of the farm will pay.

It is as well to remark, in conclusion, that all localities are not equally suitable for bee-keeping. We believe there are few farms on which bees, properly managed, cannot be kept with some profit, but there are neighborhoods, and multitudes of them, peculiarly suited to bees, where perhaps hardly any hives are kept. What we contend for is, that bee-keeping deserves to take rank side by side with the other economies of the farm; and we maintain that while "enormous profits" are not to be expected nor cases of failure prevented, there are few investments of time, trouble and outlay that will pay better, if indeed so well, as those connected with a rightly managed apiary.

Two young men out riding were passing a farmhouse where a farmer was trying to harness an obstinate mule. "Won't he draw?" said one of the men. "Of course," said the farmer, "he'll draw the attention of every fool that passes this way." The young men drove on.

Italian Bees and Clover.

A correspondent of the Country Gentleman says, in conversation with a gentleman who is largely interested in keeping bees, he stated that one great advantage that the Italian has over the common bee is that it can gather honey from the red clover, which the common bee cannot do, as its proboscis is not long enough. It occurs to me that if this be so, persons raising clover seed might find it an advantage to keep a few stands of Italians, as it is stated by some naturalists (Darwin for one) that we are indebted to the common bumble bee for fertilizing the bloom of the red clover, as in its search for honey it presses the pollen into the flower where it can reach the pistil; and that in places where local causes have destroyed the bumble bee, it is nearly impossible to grow red clover successfully. Now, as the bumble bee is found in comparatively small colonies, it might be well for some of our clover seed growers to try the experiment as to what effect the introduction of a few stands of Italians would have on the increase of seed above the average. What do you think of it? We do not understand all the balances of nature; yet we know that in many cases we are indebted to the insect world in such affairs as this and while many species only compensate in this way for the damages done in others, this insect seems to promise only good.

THE BEES throughout the world, as known collectively to the richest cabinets, number about two thousand species.

THE ACTION OF LIGHT causes honey to crystallize. Bees are taught by instinct to keep their hives dark and will carefully stop every crevice with propolis. Honey when stored elsewhere than in the hive should in like manner be secluded from the action of light.

ROBBER BEES.—It is said to be a complete check on robbing, to place a bunch of grass or wet hay over the entrance to the hive. The bees belonging to the hive will readily find their way to the entrance, while the robbers will be caught by the sentinels, and then pilfering brought to an ignominious end.

BEES IN THE UNITED STATES.—There are two million bee hives in the United States. Every hive yields an average of twenty-two pounds of honey. The average price at which honey is sold is twenty-five cents a pound; so that after paying their board, the bees present us with a revenue of \$8,000,000. To reckon it another way, they make a clear gift of a pound of pure honey to every man, woman and child in the United States. Over twenty-three and one-third million pounds of wax are given to us by these industrious workers. The keeping of bees is one of the most profitable investments that our people can make of their money, the profits arising from the sale of surplus honey averaging from 50 to 200 per cent. on the capital invested.

BEE KEEPING.—Bee keeping is honest, honorable and easy. It need but little capital and no unusual skill; neither great strength nor profound learning. It does not depend on political favor or the smiles of the rich. Rural, but not rude; royal, but not vigorous—it is as the smiles of nature and a quiet spot. It makes by saving, and does not injure by taking. It requires many operatives, but they board and clothe themselves, requiring of their employer only a cheap, suitable place to store the product of their skill and industry, ready for his or her use, or for market. It can be done almost anywhere, and more money made from the same amount of capital and labor than in any other business. Many a farmer, says F. R., in the Bee Journal, loses more than he makes by not keeping bees, or not keeping them properly. He and his family grow prematurely old with ploughing and reaping, mowing and hoeing, and all the busy incidents incident to tilling, while every flower is saying to them, "Send me bees and I will relieve you from wasting toil. These sable servants challenge competition in converting the sweet treasures of nature to their master's use. Spare them life—it is short at best. Let inventive genius pro-

tect and aid them—they will appreciate favors. We cannot afford to do without bees, much less to keep them in a profitless manner. The profits of bee-keeping may, no doubt, be doubled, and who shall provide a feasible way to do it will deserve a niche with him who makes the blades of grass grow where one grew before.—The Field.

Correspondence.

Silk Culture in Canada.

(To the Editor of the CANADA FARMER.)

SIR—A subscriber at Smithville asks if the silkworm can be "profitably cultivated in Canada," and solicits information upon the subject.

I suppose the inquirer refers to the common or Chinese silkworm (*Bombyx mori*), and in reply it may be stated that it cannot. All attempts at silk culture from this insect in Canada or the northern portion of the United States have failed, the principal obstacle perhaps being the difficulty of acclimatizing the proper species of mulberry tree so as to insure the insect a seasonable and constant supply of food; and upon no other plant can it be successfully reared.

There are, however, four kinds of caterpillars indigenous to Canada, whose silk-producing powers render them eminently worthy the attention of persons interested in sericulture. Their cocoons are composed of very strong, durable silk similar to the Tusseh and Arindy silkworms of India, and they produce more than six times that of the common Chinese silkworm; and though somewhat coarser than the silk of that insect, is equally capable of being woven into fabrics beautifully fine and of wonderful durability. These four insects are placed by entomologists among the Saturniidae, and are known as *Atticus cecropia*, *Atticus polyphemus*, *Atticus luna*, and *Atticus promethea*. They belong to a division of the Bombyces, to which Linnaeus applied the name *Atticus*, and have all been figured and described in previous numbers of the CANADA FARMER.

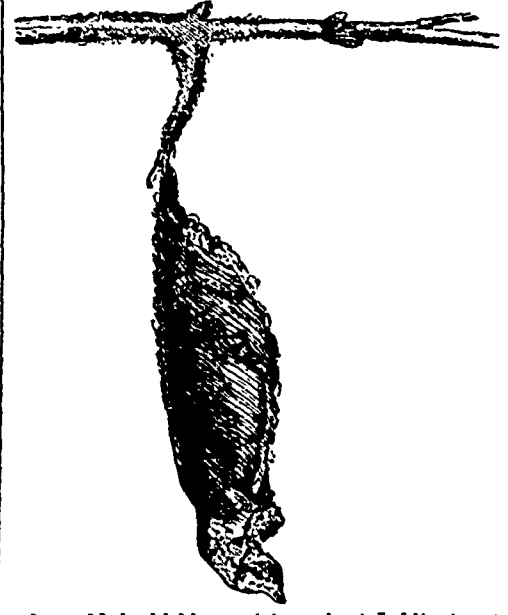
I have raised hundreds of the two first named without experiencing any difficulty whatever, feeding the *cecropia* upon the leaves of the plum and apple, and the *polyphemus* upon oak and basswood leaves, the latter being much preferred by the insect.

Of raising the *promethea* my experience has been limited. It feeds upon the white ash, and is said to do equally well upon the common garden lilac. My experience in raising the *luna*, perhaps the most beautiful of the group and certainly the rarest, is even more limited, having been unable to obtain a sufficient amount of "stock" to commence with. Of seven eggs given me by a friend, four hatched and attained maturity, thriving well upon its natural food—hickory leaves, which were supplied fresh daily. One of them, just previous to spinning, was killed by its companions, while the remaining three spun up in their cocoons in the ordinary course; but strange to state, from some unknown cause, never came out as moths, and I still retain them intact as specimens. I infer, however, that the insect can be reared as easily as the others, although the silk produced by it renders it less worthy of attention for that purpose.

For the purpose of silk-raising the *cecropia* and

polyphemus are beyond dispute the more preferable, and the business of rearing the caterpillars from the egg is very easily accomplished, and attended with no more difficulty than that which attaches to the common silkworm, while the hardy nature of the insects, the ease and certainty with which their food can be supplied, and the large amount of valuable silk furnished, renders them well worthy special attention. In the United States the culture of this silk has already received considerable attention, and the breeding of the insects has become an object of considerable importance. Silk of the *polyphemus* silkworm, amounting to many hundreds of pounds weight, has been raised and either carded or wound from the cocoon, and manufactured into articles of wear which possess a beauty of texture and a durability fully equal to the silken fabrics of the Indian worms referred to. The labors of several gentlemen in the State of Massachusetts in the culture of this silk have been attended with a success the most encouraging, and which leaves no doubt but that the final result of their enterprise will be sufficiently remunerative in a commercial point of view to warrant and induce a sufficient investment of capital to place it upon the business basis which its importance deserves. The method employed in the preparation of the silk for market by these gentlemen I have not learned, but I do not think that the process is considered a secret of trade, and doubt not that it could be obtained without difficulty by application to the proper quarter by persons interested in the matter.

Referring to the celebrated silkworms of India, the Tusseh and Arindy moths so frequently spoken of by entomologists and travellers, and to which the Canadian insects are so closely allied, Kirby and Spence say: "The insects are both natives of Bengal. The first (*Atticus papilio*, Linn.) feeds upon the leaves of the jujube tree or byer of the Hindoos and upon the *Terminalia alata glabra*, Rox. b., the ascen of the Hindoos, and is found in such abundance as from time immemorial to have afforded a constant supply of a very durable, coarse, dark-colored silk, which is woven into a cloth called Tusseh-doothies. This fabric is much worn by the Brahmins and other sects,



and would be highly useful to the inhabitants of many parts of America and the south of Europe, where a light and cool, and at the same time a cheap and durable dress, such as this dress furnishes, is much wanted. The durability of this silk is really astonishing; as, after constant use for nine or ten years, it does not show the least appearance of wear or decay. The insects which make this silk are thought by the natives of so much consequence that they guard them by day to preserve them from crows and other birds, and by night from the owl. The second, the Arindy silkworm (*Phalæna cynthia*,

Drury), feeds solely on the leaf of the Palma Christi, and produces remarkably soft cocoons, the silk of which is so delicate and glossy that it is impracticable to wind it off like other silk from the cocoons; it is therefore spun like cotton, and the thread thus manufactured is woven into a coarse kind of white cloth of loose texture, but of still more incredible durability than the other, the lifetime of one person being seldom sufficient to wear out a garment made of it. It is used not only for clothing, but for packing fine



cloths. Some manufacturers in England to whom the silk was shown, seemed to think that it could there be made into shawls equal to any received from India.

These remarks are equally applicable to the quality of the Canadian silkworms' produce; and the objection which has stood in the way to its more general culture, the difficulty of unwinding or carding the silk from the cocoon, can be overcome without any particular difficulty. I found that one-third part of the common corrosive potash used in soap-making, added to two thirds of warm soft water, was sufficient to dissolve the gummy substance which attaches to the cocoons and renders them stiff and parchment like, without injury to the silk, which could then be unwound or carded with perfect ease. After allowing the cocoons to remain in the solution a few minutes, they should be gently rinsed in clean, warm soft water, in which they may be suffered to remain during the process of unwinding the silk.

In a future article I shall give a few practical instructions for the guidance of those who may wish to give the culture of silk from the Canadian insects a trial, with some particulars connected with their habits not mentioned in "the books;" and it now only remains to add that "a subscriber" or others interested can see at the office of the CANADA FARMER specimens of the silk of these caterpillars unwound from the cocoon and clear of gum, as well as specimens of the moths of each.

Engravings are given with the present article of the cocoons of cecropia, promethica and polyphemus; that of the luna is so similar to the last named, as to render an illustration unnecessary. E. H. C.

Abnormal growth of Potatoes.

(To the Editor of the CANADA FARMER.)

SIR:—I have the pleasure to enclose, with this communication, some sketches of a very extraordinary "sport" occurring in a potato-patch in our county, and I think I may with some confidence hazard the opinion that from the first description of this admirable esculent by Caspar Bauhin in 1590, or, if you prefer the popular opinion, its first transplantation into Ireland from Virginia by Sir Walter Raleigh up to the present moment, no more singular tuberous eccentricity has been developed.

On Saturday, the 29th day of August, a farmer named John O'Neill, residing in the 10th concession of the township of Smith, brought into Peterboro', and deposited in the shop of Mr. Kempt, chemist, where they were seen by myself and many others, the produce of one hill of potatoes. He had gathered them—I cannot say dug them, for a reason that will appear hereafter—but a few hours previously, and they were consequently perfectly fresh. In all there were nearly forty tubers, every one of which was more or less eccentric in habit. The largest of these I sketched weighed nearly half a pound, and bore a

striking resemblance to an ape. My sketch is a faithful and accurate representation, without the slightest exaggeration, and, as will be observed, has arms, with hands and nails, the latter quite white, partially developed legs, and a pot-belly precisely similar to that of the *simia satyrus*; there is also a small spherical excrescence which may pass for a head.

Another peculiarity of these potatoes is, that from many of them leaves are sprouting, as shown in the smaller drawing, the leaves, when I saw them, being quite fresh and unwilted.

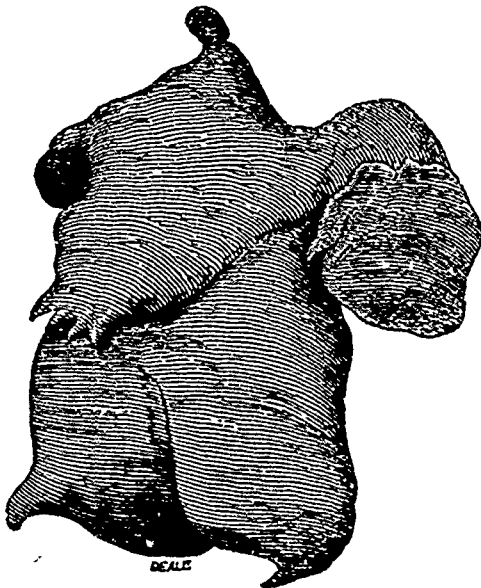
Still another singular circumstance connected with them is that, with the exception of two or three, they all grow upon the halms of the plant, and not beneath the surface of the ground.

The man in whose field these monstrosities were produced offers no explanation respecting their appearance. In the last week of April he sowed Early Rose seed, and the result, with the exception of the above-named "hill," was a crop of potatoes of that best of all our known varieties. Neither have I any theory to suggest. "Freaks of nature" are not very unfrequent, but the one now pictured and described



is the most singular that has been presented to my notice in the vegetable world.

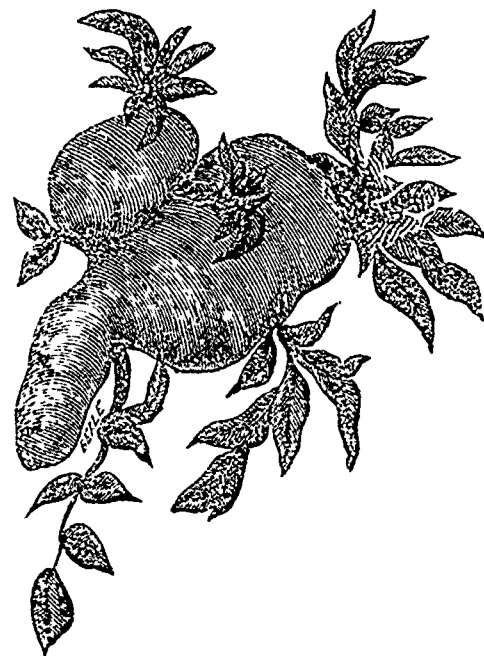
I wish, with all my heart, that Darwin could obtain a sight of these potatoes. They might add



another to his "Theories of Development." No traces man ("fearfully and wonderfully made" indeed!) back to the "lowly organized lancelet," thus assigning him "a pedigree of prodigious length, but not, it may be said (and truly), of noble quality."

With these specimens of the *solanum tuberosum*

before his eyes, who knows but that he might extend the pedigree into another and even less "noble" kingdom. He can scarcely make "smaller potatoes" of us than he has already done.



I will only add that the drawings of the larger potato are, to suit the dimensions of the pages of your journal, reduced in size about one-third.— I am, &c., VINCENT CLEMENTI, B.A. Peterboro', September 1, 1874.

Three-Thorned Acacia for Hedges.

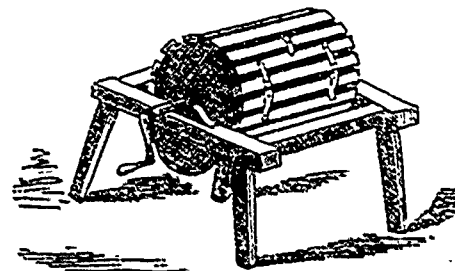
(To the Editor of the CANADA FARMER.)

SIR:—I have in one or two instances seen a recently planted hedge of three-thorned acacia which the planters expected would be successful; but although I have travelled over a good deal of south-western Canada, where this tree grows to a considerable size, I have never seen an actual hedge of it. Could you or any of your readers inform me where such a hedge has been a success in Canada, and what its merits and demerits? It is certainly well supplied with thorns, and does not seem so much inclined to sprout as other acacias. The tree grows to a large size, and seems to endure this climate. Will it form a close hedge? Is it liable to diseases and insects? Will it sprout if ground contiguous be ploughed? Will not its roots take possession of a wide space? These are questions which I hope some of our friends can answer. Perhaps some one who has seen it tested in the United States can best answer these questions.— I am, &c., E. M.

Duart, August 31st, 1874.

Root Cleaner.

"A Perth correspondent" asks about a simple root-cleaner. The annexed figure illustrates one of the most simple and effective appliances for the purpose that we know of. The cylinder is two feet in diameter, and three feet long; the head made of two



inch plank, and the slats one inch thick, two inches wide and three-fourths of an inch apart. The door is put on with a pair of strap hinges as represented. Roots may be completely washed by revolving the lower part of the machine in water.

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The Canada Farmer.

TORONTO, CANADA, SEPTEMBER 15, 1874.

Agricultural Fairs.

As we are now rapidly approaching the period of shows and fairs, a few remarks on the general subject may prove acceptable. There are two or three classes of people springing up amongst us who are beginning to look on these fairs as degenerating. One contends that their novelty has declined; that we see, year after year, but a repetition of the same old scene, and that, in fact, constant familiarity with that scene, like familiarity with anything else, breeds contempt. Another class maintains that these fairs are gradually but surely losing their agricultural complexion; that they are no longer run by farmers but by gamblers and jockeys, who get small premiums awarded for collected stock simply to take the odium of "horse-racing," &c., away; that the agricultural phase, so far as it goes, is merely a means to an end, the end being disreputable speculation. Others again declare that our fairs are managed by politicians and office-seekers, and that as a rule they are becoming subservient to their use. There may be a little truth in all these positions, although the first one is rather feeble to admit of serious consideration. There is undoubtedly a certain amount of sameness connected with our agricultural shows, and that sameness must to some extent continue with the shows. But few will be prepared to say, in contrasting the present with ten or even five years ago, that there has not been marked change, variety and improvement. With regard to the second objection, it cannot be denied that in certain districts it constitutes a strong one—happily, however, only in few districts; and the only remedy for such a state of things is that farmers take the management of shows wholly into their own hands and see that nothing is permitted that might prove detrimental to their usefulness as educators. It should never be forgotten that the great object of agricultural fairs is educational. Fair days are not mere holidays as some suppose. A certain amount of relaxation is, of course, incidental to them, but not their aim by any means. Since the custom has originated too of owning show grounds and charging entrance fees at the gate, the tendency has been to make the fair attractive by the introduction of side shows, and to

calculate the success by the rent-receipts. Hence the introduction of swings, greased poles, sack races, &c., &c.—matters entirely foreign. The answer to this, that it draws the crowd and pays, is superficial. It may pay temporarily. So long as the novelty lasts the crowd will assemble and harrah. But is it on the whole the right kind of a crowd; and is it not a question worthy of thought whether these sales-bubbles do not keep away as many as they attract? Horse racing is another side issue, which was introduced in the first place for much the same purpose, and at some fairs across the border, it has so encroached upon the exhibition as to put the farmers and their stock and products in the background, and in some instances has driven them from the grounds. "There is a shadow of a reason," says a contemporary "for introducing trotting at a fair, as the horse is a legitimate product of the farm and speed one of the desirable attributes of a horse; but so much being granted, we contend that the race course is no more an ally of agriculture than that the constellation in the heavens which is called the Great Bear is a component part of a farmer's stock. It is an entirely separate institution from a fair, has different laws, different associations, and a totally different result. When hundreds of dollars are offered for the fastest trotting horse and only \$10 for the best cow, \$5 for the best sheep, \$3 for the best exhibition of fruit, \$2 for the best butter, and \$1 for the best vegetables, farmers may well conclude that their products are at a discount with the managers of fairs.

The horse is a noble animal, and is an indispensable adjunct of the farm, but a trotting horse, one of the 2.40 kind, in no sense belongs to the farm. No farmer can afford either to tend or use trotting horses, and when it is pretended that the race course favors the breeding of superior animals, it is all fudge. What the farmer wants, and what fairs should give premiums for, is a good family carriage or farm horse, worth \$200 or \$300; one that can draw a plough all day, and eat and sleep well at night; that can move on the road at the rate of five to six miles an hour for four or five consecutive hours without excessive fatigue. Speed is not the great criterion of a good horse, as the large premiums offered would seem to indicate. Neither the owner nor spectator gains anything by this forced 2.40 speed. It is a mere momentary spurt, and for its production an amount of training is required which no farmer can afford.

Will the objection be raised, "We must have a little fun?" We do not object to fun and plenty of it; but who can possibly derive fun from witnessing a horse goaded on to exertion beyond all reasonable bounds in order to compass a mile in an incredibly short time? There is some excitement about a race, we grant, and if there are those who must live on excitement, let them have a race course away from the fair grounds. The fair will flourish more, and accomplish its legitimate results better, without than with racing. If the exhibition of good stock, farming tools and farm products, the meeting of friends, and the generous rivalry for premiums do not furnish attraction and excitement enough to draw out those interested in agriculture, then it is time that our fairs should cease, and it is no longer worth while for the State to patronize them with large subsidies.

The Royal Show at Wexford.

The Wexford Show of the Royal Irish Society on the 13th, 14th, 15th ult. was generally considered good. The Purdon challenge cup, value \$320, for the best Short-horn bull, was won by Mr. A. H. Brown of Duxford, Northumberland, and the Purdon challenge cup, value \$320, for second best Short-horn heifers, by Lady Pigot of Branches Park, Newmarket. The Lord-Lieutenant visited the show yard, accompanied by Lord and Lady Carew, and was heartily cheered

by all classes. A number of the landed proprietors of the country were present.

The *Daily News* says:—The class for Short-horns is always the most important at such exhibitions. The entries numbered sixty-two. They were for the most part drafted from the immediate vicinity of Wexford, but some of the competitors came from England. Mr. A. H. Brown of Chatham, Northumberland, sent forward some very splendid animals. The entries in other breeds, such as Devons, Herefords, Polled Angus, Ayrshire Kerries, and Channel Islands, were exceedingly few. The show of sheep was, as usual, large, the Leicesters and Border Leicesters predominating. There was also a numerous display of pigs and poultry—both most important departments for the agriculturists of Ireland.

In the implement department the Show this year was very largely dependent upon English contributors, as there was not a single exhibitor from Scotland.

Provincial Exhibition.

The preparations for the forthcoming Exhibition of the Provincial Agricultural and Arts Association, which opens in this city next week, are now complete. For several weeks past a number of workmen, under direction of the City Engineer, have been engaged in the work of adding to and altering the accommodation previously existing, the result being the erection of the following:—1. Five large and commodious stables, with 54 stalls in each, equal to 900 feet in length, with a depth of 30 feet 6 in. 2. Feed boxes for 270 new stalls, and the same number for the old ones. 3. Cattle sheds 900 feet long by 24 feet deep. 4. Sheep pens 400 feet long by 24 feet deep. 5. Pig pens 900 feet run. 6. Carriage sheds 250 feet long by 24 feet wide. 7. Machine sheds 100 feet long by 30 feet wide. 8. A barn for hay and feed 37 feet long by 24 feet wide. All the buildings have been constructed of lumber of the best quality, so that they will not so soon fall into decay as those used on the last occasion of the Exhibition being held here.

The prize list embraces 59 classes, being seven more than last year, and at the date of our going to press, the entries in the various classes aggregate very much higher than those of either 1872 or 1873. Altogether it is safe to predict that this will be the largest and best show ever seen in the Province, and, should the weather prove moderately favorable, will be perhaps the most successful.

The following will be the programme for the week:—

Monday, September 21st, will be devoted to the final receiving of articles for exhibition, and their proper arrangement. Officers and members of the Association, judges, exhibitors, delegates, members of the press, and necessary attendants, will be admitted on presenting the proper credentials, badge, or ticket of admission. Other persons will be admitted on payment of 25 cents each time. The rules for admission will be the same throughout the Exhibition.

Tuesday, 22nd.—The judges in all the classes will meet in their respective committee-rooms at 10 a.m., and will make arrangements to commence their duties. On receiving the class books, they will be also furnished with the blank prize tickets, which they shall fill up and affix in each section so soon as they shall have finally determined their awards. The first prize tickets will be red; the second, blue; the third, yellow; the fourth, white; extras, green; the "Highly Commended" and "Commended" tickets, white. On completing the class, the judges will report to the Secretary. The main Exhibition building will be closed all this day, for the purpose of affording the judges an opportunity of discharging their duties properly. Non-members will be admitted to the grounds on payment of 25 cents each time. The annual meeting of the Fruit Growers' Association will take place at the Agricultural Hall at 7 p.m.

Wednesday, 23rd.—The judges of the various classes will complete their awards as early in the day as possible. All the buildings and grounds will

be open to visitors. Admission the same as on Monday and Tuesday. The annual meeting of the Mechanics' Institute Association will take place at the Agricultural Hall this evening at 7 o'clock.

Thursday, 24th.—Admission, 25 cents. The prize animals will be exhibited in the ring at 2 p.m. The annual meeting of the Directors of the Provincial Agricultural Association, for the purpose of electing auditors, deciding upon the place of holding the next exhibition, and other business, will take place at 7 p.m., at the Agricultural Hall, corner of Yonge and Queen Streets, Toronto.

The President will deliver his address at the Annual Meeting.

Friday, 25th.—Admission the same as on previous days, till 2 p.m. At 2 p.m. the Exhibition will be considered officially closed, after which no one will be admitted into the Crystal Palace, and exhibitors may commence to take away their property.

Saturday, 26th.—The Treasurer will commence paying the premiums at 9 a.m. Exhibitors will remove all their property from the grounds and buildings. The gates will be kept closed as long as necessary, and none will be admitted except those who can show that they have business to attend to.

Boys at the Fair.

We assume that an intelligent boy wishes, when he goes to a county or provincial fair, to have a good time, to enjoy himself, and also to learn what he can, especially in those branches of agriculture in which he is most interested. A good deal of observation enables us to say positively that the best way to gain either object is not by constant, aimless hurrying from one part of the ground to another, by insisting on making one of every crowd that collects, by commencing in the morning and continuing as steadily as possible throughout the day to buy and eat and drink cakes, nuts, fruits, melons, candy, pop-corn, cider, lemonade, etc., or by making a point of visiting every "side show," trying every game, purchasing all the prize packages, etc.

Our two general directions, says the *Western Farmer*, would be:—Don't hurry, and work systematically. Suppose you reach the grounds at 10 o'clock and leave at 4 o'clock. Here are six hours, and in that time an ordinary fair can be very well seen.

It is not to be expected that the average boy or man will set to work to examine each article or department in regular order, refusing to look at anything until it is reached in its turn. It is well enough to take a general look, going over the grounds and getting a general idea of the exhibition, and of where the things are in which most interest is felt; then give such time as is thought can be spared to the examination of each department, of course giving the most time and attention to those in which there is the most interest, but no farmers' boy should be so interested in any one department as to refuse or neglect to try to interest himself and get information about other departments.

Even a boy should look at things with a desire to learn something from it as well as to satisfy curiosity. It will help to use one's ears as well as one's eyes, and fortunately these can generally be well employed without the free use of the tongue. If one can look at objects of interest in company with some older and better informed, and who would give needed information, it is a great help.

We suppose that if a horse, or ox, or piece of machinery were taken from its stall or bench and put in a tent with a big picture of it outside and an admission fee of 25 cents, many more boys would have a strong desire to see it than if it had been left open to their inspection. By this illustration we mean to suggest that it is not at all certain that the curiosities in the side shows are nearly as curious or interesting as many things in the general exhibition. As a rule the boy who does not get the opportunity to see these shows, loses very little.

It is a misfortune that at most large fairs there are opportunities for those who wish to try to get something without giving a full equivalent for it—by buying prize packages, investing in some little lottery, betting on some trick. It is a good thing, however, that as a rule those who do try are disappointed. We are sorry to see any boy lose hard earned money, but it is vastly better that he should than that he should gain money in any of these ways.

A Veteran Farm Hand.

It is generally supposed, says the *Albany Evening Journal*, that when a man reaches the allotted age—threescore years and ten—he is not capable of doing as much hard labor as a man of forty or fifty years. And when he passes threescore and ten, and even exceeds ninety, it is something wonderful if he retain the full possession of his faculties, and is able even to do a few small chores about the premises.

But the case is told of James Cameron, a farm hand in the employ of Mr. Sloan, about eight miles from Albany, who is now verging on his ninety-fourth year, yet is hale and hearty as most men at fifty. He is now engaged in harvesting, and does a full day's work with the rest, taking his turn at mowing, cradling or reaping, and fulfilling all his tasks with perfect satisfaction to his employer, and, we may say, himself. He fully earns his two dollars per day, the wages that are paid to the most efficient hands, and sustains his declining years by his own exertions, independent of kith or kin.

The old gentleman is blessed with perfect health, a clear understanding, and a vigorous constitution, and will probably yet live to be classed among the centenarians. He belongs to a race of long-lived people, his mother having attained the age of one hundred and eight years at her death.

United States Fairs.

We publish below a list of the leading United States Fairs now in progress or yet to come off.

State Fairs.

California—Sacramento, Sept. 21st to 26th.
Colorado—Denver, Sept. 22nd to 26th.
Connecticut—Hartford, Sept. 22nd to 25th.
George—Atlanta, Oct. 19th to 25th.
Illinois—Peoria, Sept. 14th to 18th.
Indiana—Indianapolis, Sept. 7th to Oct. 7th.
Iowa—Keokuk, Sept. 21st to 25th.
Main—Lewiston, Sept. 22nd to 25th.
Maryland—Baltimore, Oct. 6th to 10th.
Mississippi—Jackson, Oct. 26th —
Montana—Helena, Sept. 14th to 21st.
Nebraska—Omaha, Sept. 29th to Oct. 2nd.
New Hampshire—Manchester, Sept. 29th to Oct. 2nd.

New Jersey—Waverly, Sept. 14th to 19th.
New York—Rochester, Sept. 14th to 18th.
North Carolina—Raleigh, Oct. 10th to 19th.
Oregon—Salem, Oct. 12th to 17th.
Pennsylvania—Easton, Sept. 29th to Oct. 2nd.
Virginia—Richmond, Oct. 27th to 30th.
West Virginia—Clarksburg, Sept. 22nd to 24th.

Industrial Fairs.

American Institute—New York, Sept. 9th to Nov. 14th.
Annsville and Lee—Taberg, N. Y. Sept. 16th to 18th.
Cincinnati—Cincinnati, O. Sept. 2nd to Oct. 3rd.
Franklin Institute—Philadelphia, Oct. 6th to 31st.
Kansas City—Kansas City, Mo. Sept. 14th to 18th.
Louisville—Louisville, Ky. Sept. 10th to Oct. 7th.
Worthington, Ind.—Worthington, Ind., Oct. 5th. to 9th.

Horticultural Fairs.

Horticultural—Concord, N. H. Oct. 6th to 8th.
Maine Pomological—Portland, Sept. 22nd to 25th.
Massachusetts Horticultural—Boston, Sept. 15th to 18th.
Michigan Pomological—East Saginaw, Sept. 14th to 19th.
Newburgh Bay—Newburgh, N. Y. Sept. 22nd to 24th.
Pennsylvania—Philadelphia, Sept. 15th to 19th.
Worcester Hort.—Worcester, Mass. Sept. 29th to Oct. 2nd.

The fifth number for 1874-5, of F. K. Phoenix's *Descriptive Catalogue* of hyacinths, tulips and other spring flowering bulbs, is before us—neatly printed, and full of precisely the sort of information necessary to successful floriculture.

Fall Exhibitions.

Blenheim—Drumbo, Sept. 25th.
Bothwell—Thamesville, 5th and 6th Oct.
Brock—Sunderland, 16th and 17th Sept.
Burford—Harly, Oct. 13th.
Caledon—Charleston, Oct. 8th and 9th.
Cardwell—Mono Mills, Sept. 29th and 30th.
Centre Wellington—Fergus, Oct. 2nd.
Cramahe—Colborne, Oct. 16th.
East Garafraxa—Marsville, Oct. 13th.
East Oxford—Oxford Centre, Sept. 18th.
East Nassau—Kintore, Oct. 13th.
East Wawanosh Branch—Belgrave, Sept. 30th.
East York and Markham—Markham, 1st and 2nd October.
Egmont—Holstein, Oct. 9th.
Ema and Wallace—Lastowel, Oct. 7th and 8th.
Eramosa—Rockwood, Sept. 29th.
Erin—Erin Village, Oct. 7th.
East Zorra—Strathallan, Sept. 26th.
Esquesing, Oct. 2nd.
Euphemia and Dawn—Florence, 9th Oct.
Grey Branch—Brussels, Oct. 6th.
Guelph Central—Guelph, 15th to 18th September.
Haldimand—Centreton, Oct. 4th.
Hamilton Central—Hamilton, 6th to 9th Oct.
Harwich—Blenheim, 14th Oct.
Howick—Wroxeter, Oct. 7th.
Hullet Branch—Clinton, Sept. 15th and 16th.
Kent—Chatham, 7th and 8th Oct.
Luther—Little Toronto, Oct. 7th.
Mitchell, Oct. 6th and 7th.
Minto—Harriston, Sept. 30th.
Monck, Electoral—Wellandport, 9th and 10th Oct.
Mono—1st and 2nd Oct.
Nassagaweya—Haltonville, Oct. 7th.
Niagara Electoral Division—Niagara, Oct. 1st and 2nd.
North Bruce—Port Elgin, Oct. 2nd.
North Riding Brant—Paris, Oct. 8th and 9th.
North Norwich—Norwich, Oct. 2nd and 3rd.
North Huron—Blyth, Sept. 17th and 18th.
North Ontario—Port Perry, 28th and 29th Sept.
North Simcoe—Oct. 13th and 14th.
North and West Oxford—Ingersoll, Sept. 22nd.
North Riding Oxford—Woodstock, Oct. 6th and 7th.
North Waterloo—Berlin, 13th and 14th October.
North Wellington—Drayton, 9th Oct.
Normanby—Ayton, Sept. 30th.
Puslinch—Aberfoyle, Oct. 9th.
Provincial Exhibition—Toronto, Sept. 21st to 25th inclusive.
Raleigh—Charing Cross, 6th Oct.
North Riding Huron—Exeter, Oct. 5th and 6th.
South Ontario—Whitby, 17th and 18th Sept.
South Riding Oxford and South Norwich—Otterville, Oct. 8th and 9th.
South Grey—Durham, Oct. 7th.
Stanley Branch—Bayfield, Sept. 25th.
South Waterloo—Galt, 29th and 30th Sept.
Tilbury East—Town Hall, 6th Oct.
Tuckersmith Branch—Seaforth, Sept. 17th and 18th.
Turnberry Branch—Wingham, Oct. 2nd.
Welland—Welland, 1st and 2nd Oct.
Wellesley—Crosshill, Oct. 3rd.
Western Fair—London, Sept. 29th and 30th, and Oct. 1st and 2nd.
Wilmot—New Hamburg, 8th Oct.
Woolwich—Elmira, Oct. 7th.
West Durham—Bowmanville, 1st and 2nd Oct.
West Flamboro—Dundas, Oct. 1st and 2nd.
West Garafraxa—Douglas, Oct. 8th.
West Northumberland—Cobourg, 20th and 21st October.
West Riding County and Township of Hamilton—Cobourg, Oct. 20th and 21st.
West Zorra—Embro, Oct. 9th.
Zurich Branch—Sept. 28th and 29th.

The Guelph Central Fair

Some people are in the habit of asserting facetiously that there is nothing like a gathering of teetotalers or a fair for ensuring rain. Though the proposition is not one of which anyone would be found willing seriously to undertake the defence there would seem to be something like an argument from example furnished in support of the latter portion of it by the sudden change in the weather which the people of Guelph have experienced since last night. For weeks we have had the unintermitting period of drought, and last night there was no sign, unless it was furnished by the barometer, to indicate that there was about to be a change. This morning, however, the morning of the opening day of the Central Fair, a slight shower of rain fell shortly after daybreak. This did not last long, but about eleven o'clock another set in, and the rain continued to fall smartly for upwards of an hour, turning into mud the dust of which people complained grievously yesterday, and from which they anticipated much discomfort to visitors to the fair ground during the week. Since then the sky has been overcast, and there is, at the present writing, a good prospect of the continuance of the rain.

The railway stations and the show ground are uncommonly lively this morning, with the arrival of animals and articles for the exhibition, which continued coming in to so late a period in the forenoon that it was not until after one o'clock that everything was in its place; and the judges were enabled to do but little to-day.

Mr. Murton, the secretary, had a hard time of it endeavoring to gladden the hearts of exhibitors who had received tickets to put upon their exhibits, but lost them; in issuing merchants' and exhibitors' entry tickets, in answering questions on every subject connected with the fair, &c. He is a man possessed of a great amount of patience, however, and is disposed to be obliging, and therefore managed to do his share towards getting everything into running order, without losing his temper.

Below is the complete list of entries for 1873, as well as those for 1874, from which it will be seen that there are upwards of 300 less this year than last. On the whole, the show is not equal to those of previous years, though in some departments, notably in that of horses, there is a large increase.

	1873.	1874.
Blood horses	21	11
Agricultural horses .. .	171	164
Road or carriage horses ..	132	246
Heavy draught horses .. .	86	122
Durham cattle	112	109
Devon cattle	22	24
Hereford cattle	35	46
Ayrshire cattle	41	34
Galloway cattle	42	57
Thorough-bred bulls .. .	6	6
Grade cattle	51	48
Fat and working cattle .. .	46	50
Cotswold sheep	104	75
Leicester sheep	163	103
Lincoln sheep	43	43
Other long-wooled sheep ..	73	35
Southdown sheep	69	57
Fat sheep	22	22
Yorkshire pigs	18	18
Suffolk pigs	19	40
Improved Berkshire .. .	1	1
Essex Pigs	19	40
Poultry	499	537
Grain, seeds, hops, &c. ..	285	409
Roots and other field crops	1	1
Fruit, &c.	84	116
Garden Produce	266	261
Plants and flowers .. .	207	213
Dairy produce	24	22
Groceries and provisions ..	24	106
Agricultural implements ..	71	70
Agricultural tools	24	39
Cabinet wares, &c. .. .	3	50
Carriages, sleighs, &c. ..	1	11
Chemicals, &c.	10	16
Drawings, engravings, architectural and mechanical, &c. .. .	8	80
Building materials .. .	60	136
Fine Arts (Professional) ..	136	251
Fine Arts (Amateurs) .. .	236	141
Ladies work	110	4
Domestic manufactures ..	43	26
Machinery castings, &c. ..	10	10
Sewing and knitting machines	43	43
Metal work	28	28
Musical instruments .. .	20	2
Natural History	27	27
Paper printing, &c. .. .	20	2
Saddlery, trunks, &c. .. .	27	27
Shoemakers' work	48	42
Leather	10	10
Woolen, flax and cotton goods, &c.	5,453	5,136

A New Source of Food Supply.

Much good has unquestionably been effected by those practical naturalists who have devoted attention to the discovery of new forms of nourishment. Even the hippophagists and other amiable enthusiasts may have indirectly benefited the world by proving that food capable of sustaining human life is often thrown away as worthless. The latest suggestion in this way comes from Mr. Frank Buckland, who, in the current number of *Land and Water*, gives an amusing description of hunting, cooking, and eating wild cats, in the mountainous country between France and Spain. Before a hunt takes place, hants fastened with wire are put down, to ascertain whether any of the required game happen to be in the vicinity. This point being decided, sportsmen suitably forth, the ground is beaten backwards and forwards, until the cats seek refuge in the trees, when they are shot down. At the end of the battle the dead cats are hung up in a cart covered with garlands, and the victorious party, generally headed by some provincial magnate, march in triumph through their native town. Then comes a grand feast, presided over by the mayor, at which the chief food is wild cat, served in different ways. It is difficult to imagine this dainty finding a place at the next Guildhall banquet, since English prejudices are not easily overcome. But perhaps the fact that wild cat fit for the table costs twice as much as fine hare, while its flesh is "exquisite in the opinion of every gourmand who has eaten it," may lead to the introduction of this dainty into city circles. The intrinsic value of the animal does not, however, appear to depend altogether on its qualities as an article of food. Formerly the kings of Arragon used wild cat fur as trimmings for coronation and ceremonial robes, and even at the present time it is in high esteem among the Madrienas. Admirable parchment is also made from the skin, which is reserved for documents of the highest importance. The town hall of Navarre contains a valuable registry, dated 1481, and numbering 2,500 pages, written on *peau de felin*. Viewing the fact that cat's flesh formerly was esteemed a choice dainty for the table, and the skin of the animal excellent parchment, Mr. Buckland expresses his intention of reviving the demand for both articles. Whether he will succeed in this laudable object seems doubtful when the obstinacy of English prejudice is remembered. If he does, dwellers in the cat-haunted suburbs of London will have solid cause of gratitude to the reformer who abolished a greater nuisance even than teetotal bands.—*Globe*.

Good Advice to Settlers.

At a late celebration of Queen Victoria's birthday in Virginia, Mr. St. Andrew is reported to have given his countrymen the following sensible advice, which is equally applicable to Canadians intending to migrate. He said—

- I. Come in colonies, or go to colonies.
- II. Bring money in your purse.
- III. Leave your prejudices behind.
- IV. Don't expect too much.
- V. For land or business, pay cash.
- VI. Keep two-thirds at least of your money for working capital.
- VII. Avoid land sharks. You can easily find out the reliable land agents.
- VIII. In buying land, don't get too much of a good thing.
- IX. Adhere to the old-fashioned principle of British honor. Don't attempt "smartness." Better class Americans don't admire it; but they can beat you at the game if you challenge them to it.
- X. Remember that success is more in the man than in the country.

The Plague of Locusts.

The present has been a season of tribulation to the western settlers. The drought and the chinch bug have greatly reduced the early crops, and the later harvests have now totally disappeared from hundreds if not thousands of square miles of territory beneath the singly insignificant, but collectively terrible locust. This visitation has reduced thousands of farmers to destitution. These men, with their helpless families, stand just now upon the brink of starvation. Without help, the western parts of Kansas, Nebraska and Minnesota, but more particularly the first, must be temporarily depopulated. One of the fairest countries beneath the sun must be abandoned lest the inhabitants should starve for food. Kansas to-day bleeds once more. It is a heroic attitude

which the state by its governor takes, when he states that the commonwealth will take care of its own distressed people. But we doubt not that the governor of Kansas would willingly become the means of dispensing the free gifts of feed or money which thousands of farmers, happily in the enjoyment of a wealth of golden harvest in all other parts of the Union, would gladly contribute for the assistance of their suffering brethren in the west. Seed wheat for the fall crop would be particularly acceptable. Fall wheat is, perhaps, the most certain crop in western or central Kansas, and the denuded corn-fields may be at once sown with it. We wish there could be a stream of seed poured into Topeka, or its equivalent in money, which would probably be the most feasible method of conveying assistance. It is an honorable pride which refrains from asking help, but it is equally honorable to accept what is offered in true sympathy with misfortune. Immediate help might prevent the abandonment of many farms and the fruits of much labor. Every man who has a friend or acquaintance in Kansas, or other stricken places, may now seize upon an excellent opportunity of doing good by immediately conveying such help privately as may be possible; but to help promptly is to help effectually. Fourteen days' delay may make assistance too late to be serviceable.—*N. Y. Times*.

Canadian Flies.

A correspondent of the *London Times*, who has been in Canada, writes: "I had the felicity of being in the backwoods throughout one fly season. It is no use trying to describe the agonies I suffered to people whose experience of this, at the worst, is a swarm of gnats on a summer's evening, but enough when I say I shall carry the scars they made to my grave."—*Id.*

[The thin-skinned counter-hopper who peened the above should immediately set about putting his house "in order, for his end is evidently not far off. It is really astonishing how a journal like the *Times* could allow such arrant nonsense into its columns.]

SEAS-BROKERS are uncommonly numerous in the South, the sun having been extremely hot there.

THE KENTUCKY tobacco crop will be an unparalleled failure, yielding not over 13 per cent. of the usual amount.

WITHIN the past two years \$200,000 worth of sheep have been destroyed by Kentucky dogs, and history promises to repeat itself.

MR. ROBERT WILSON, London township, has just threshed out the crop of nine acres of barley, the result being 500 bushels, over 55 bushels to the acre.

THE Southern Ohio state fair, which commences Sept. 29th, offers \$10,000 in premiums on fast horses. How much for useful things?

THE FARMERS of St. Joseph, Co. Mich., are on a strife as to who has the tallest corn. A stalk from a field planted by Wm. Fieldhouse, of White Pigeon, measured thirteen feet and nine inches.

THE MUSHROOM CROP in Anglesey is so heavy that for three days the London and North-Western Railway Company were obliged to run special trains for the conveyance of the crop to the English market.

GOOD PRICE FOR A LEICESTER TUP.—At the Inverness Show, we learn that Mr. Torrence, Sisterpath, disposed of his first prize shearing Leicester tup to the Duke of Richmond, Gordon Castle, Fochabers, at the handsome figure of 100 guineas.

THE APPLE CROP along the Mohawk Valley will be quite as abundant as the crop of last year. The trees are burdened with a larger yield than usual, but worms are very prevalent, and a great share of the crop is fast being destroyed.

THE *New York Tribune* tells a correspondent:—Rotted pine sawdust is of little value upon sandy land. In any case it possesses but little fertilizing properties, but upon stiff clay it tends to open the soil and make it lighter. The muck from bottoms of ponds or swamps would be much more valuable as a material for composting with manure.

IN THE skeleton of a horse, an ox, or even a dog or cat, there are about from one to four pounds of phosphorus. The carcass of any of these animals, cut up and distributed among fruit trees, instead of being buried out of the way as a nuisance, would be to them a rich entertainment of delicious food.

THE CHAMPION GRASSHOPPER of the season has been seen by the *Oswego (Kansas) Independent*. It weighed half an ounce.

ONE CONSEQUENCE of the good wheat crop is, that France is this year rich in bread. Last year she was poor, and had to import, probably, £12,000,000 worth of wheat and flour. She should in 1874-5 be able to export £3,000,000 to £4,000,000 worth of wheat.

PROFESSOR BUCKMAN reports to an English farmers' club that in a pint of Italian rye grass he had examined he found 7,040 seeds of weeds, from a pint of mixed grass he took out 8,400, from a pint of Dutch (white) clover, 26,500, and from a pint of Alsike clover, 7,600.

The *Cornwall Gazette* says:—Mr. John McRae of Berwick has just returned from a prospecting tour in Manitoba. He is said to be highly pleased with the climate, soil, and future prospects of that province, and it is understood he has made an extensive purchase of real estate within three miles of Winnipeg with the intention of moving there with his family in the spring.

THE CHEESE-MAKERS of New York state propose to organize themselves into a protective society. The basis is that no cheese shall be sold for less than 12½ cents per pound, and if a member must sell when the market is lower, then either the society or any member will buy it until it will bring that price.

A CORRESPONDENT of the *Rural New Yorker* reports a beet which is now growing the third season. It grew from the seed in the summer of 1872. In the fall it was pulled and saved for seed, for which purpose it was grown in 1873. In the fall it was found to be sound and was saved, and again set in the ground last spring. It has produced as good a crop the present summer as it did last year.

TRANSPORTATION is cheap now. A bushel of wheat is carried from Chicago to Buffalo for 27-8 cents, elevated at latter place for ½ a cent, and taken on cars from there to New York for 8 cents, making a total charge from Chicago to New York, of 11½ cents. Handling at New York costs 8 cents, and freight to Liverpool, 1½ cents, making a total cost from Chicago to Liverpool of only 28½ cents per bushel. Cheap enough.

JERSEY, the little island in the English Channel, sent to the London markets in two months this spring \$1,000,000 worth of new potatoes. The season's crop of this vegetable gives for the total area of the island \$35 an acre. It is believed that an equal success could be had in the southern counties of Ireland if there were energy and enterprise to try it.

The *Kingston News* says:—The largest consignment of cheese ever known to enter Kingston at any one time arrived ex-steamboat Nile from Rideau Canal. It consisted of 2,023 boxes valued at about \$18,000, the property of Algayre Bros. It may be considered an immense consignment down east, but around here 2,023 boxes do not strike the people with wonderment.

CURRENT WORMS.—A correspondent of the *Rural New Yorker* says "that two teaspoonsful of nitrate potassa to two gallons of rain water sprinkled over the currant bushes twice a day for a few days, will effectually rid the bushes of the currant worms. For the potato bug the same remedy is effectual, having this advantage over other eradicators, that it is harmless to the plants, and is also really an advantage."

PORK PROSPECTS IN THE WEST.—The *St. Louis Democrat* of August 26th has full reports regarding the corn and hog crop in the several western states, which show that Iowa has an excellent corn crop, but only 75 per cent. as many hogs as last year, and the weight of these is greatly reduced. The Illinois corn crop will be about one third less than last year, and the hogs one-half less and much lighter. Missouri will have a poor corn crop and a large falling off in hogs. In Kansas and Nebraska there will be a great reduction in both corn and hogs.

AND STILL THEY COME.—From *Bell's Messenger* we learn that Mr. Beattie purchased at Bedford, for exportation to Canada, Mr. John Downing's (Ashfield) Verbena Royal, who was highly commended in the yearling heifer class. She is a daughter of Royal Duke, and half sister to Royal Rose, Mr. Thom's second prize two-year-old, who also was bred at Ashfield, and distinguished herself as a prize-winner in Ireland. On the 10th of June, Verbena Royal, under 1 year and 11 months, girthed 7 feet 6 inches. Her length was 5 feet 2 inches, and dead weight, estimated by scale, 10 cwts. Ewart's cattle gauge was employed.

MORE BIRDS FOR AMERICA.—A very deserving institution has recently been established in Cincinnati, under the title of the Cincinnati Acclimatization Society, its object being to effect the introduction of such foreign birds as are worthy of note for their song or their services to the farmer and horticulturist. The society announces that last spring it expended \$5,000 in introducing fifteen additional species of birds, and that it has already successfully accomplished the acclimatization of the European skylark, which is stated to be now a prominent feature of the summer landscape in the vicinity of Cincinnati. Among the species which it is proposed to introduce is the European titmouse, considered abroad as one of the most successful foes of insects injurious to vegetation. —*Manufacturer and Builder.*

CIRCUMVENTING THE GRASSHOPPERS.—How the farmers of Wright County, Iowa, drove away the grasshoppers, is revealed by the local papers. The crops in that county were abundant, and the anxious husbandmen were in hopes that these destructive pests would not appear until after the harvest. At once they came, however, in clouds that darkened the sun. By a preconcerted plan, the farmers set fire to piles of dry straw on the borders of the wheat fields, and smothered the blaze with green hay. That caused volumes of smoke to roll over the fields. The grasshoppers didn't relish the procedure at all. They rose with such a multitudinous hum of wings as to deepen into a roar like distant thunder, and fled the county. In that way the Wright County farmers have a fair prospect of saving their crops.

LARGE FLOCKS PROFITABLE.—A Long-Island farmer writes to the *Riverhead News* that he kept on an average the year round 175 hens in one flock. He sold 2,212 dozens of eggs at an average of 26½ cents per dozen, amounting to \$574.77. He raised 340 chickens, of which he sold to the amount of \$71.53, reserving 156 pullets for the next season. His fowls all run together. He finds no trouble in wintering 300 in one flock, and they lay well. The fowls always have corn lying before them, summer and winter, and in cold weather they get warm bran and meal puddings in addition. When the ground is covered with snow they get timothy and clover hay, chopped fine and boiled, the hay being fed to the fowls, and the water used to wet their bran and meal. He finds this food causes them to lay nearly as well in winter as is usual in summer.

BOGS.—Farmers well know how laborious it is to subdue a marsh covered with well developed bogs. Yet, when subdued, they make the best of mowing lands. Bran is of great value on a farm. One farmer used his bran to good purpose when he executed the process of levelling a large piece of the worst of bogs, thus. He cut a ditch through it in the dry season, then made a dam across the outlet of the marsh (which happened to be quite narrow); in this dam, near the bottom of his draining ditch, he constructed a gate for shutting off the water. During the fall and winter storms this was kept shut, until the whole marsh was flooded some three feet deep. The ice in this shallow and still pond froze to the depth of about two feet. He then opened the gate, drew off all the water, allowed the vast mass of ice to grind along the uneven surface, levelling it handsomely.—*Ex.*

GOOD NEWS comes from Austria regarding the harvest. The corn has been garnered; it is a bountiful crop, and the quality of the wheat is particularly good. Barley and oats have suffered from the drought. These remarks specially apply to Bohemia, Moravia, and Silesia. In Galicia and Bukovina the rye harvest is over, and those of wheat and barley in progress. The result is on the whole satisfactory. An average crop of the three kinds of corn is expected. In central Austria the wheat is of excellent quality, and the maize looks well, but it is feared that in consequence of the very late sowings it will not ripen. In the Southern Tyrol, the harvest of rye, wheat, and barley has produced very favorable crops, and a very good crop of maize is expected. In Hungary there will probably be a good average crop of wheat and an ordinary average crop of rye, barley, and oats. The quality of the wheat is unusually good.

THE COLOR OF NORMANS.—To say that a black colored horse could not be a Norman would certainly be absurd, though it is true there are comparatively few found in France of any other color than grey colors, shading all the way from white even to black. There seems to be an effort among the French people to breed in darker colors at the present time, by using black stallions. Now, for the sake of argument, what does it take to constitute a dark grey color in a horse? Is it not a combined mixture of

black and white colors? In every dark grey the black color must predominate. The majority color in the Norman stock is dark grey, shading lighter down to a white and darker up to a black. Here we can see how absurd it would be to say that a black colored horse could not be a Norman. I have this present season imported four Norman or Percheron horses, one of them jet black in color. He possesses every characteristic of a Norman or Percheron horse.—*Cor. Prairie Farmer.*

STICK TO THE FARM.—Nobody who left it in early youth, even though he won fame and fortune for the reward of lifelong toil, but feels in the depths of his heart that irrepensible desire to get back into the tranquil country at some time, to stroll under the old trees, to sit in his still back-door and enjoy the summer twilight, to carry away with him memories of the active life which become pleasanter as memories than as facts, and to spend his declining days in the peace and quiet which the country is calculated to supply in ample measure. If the boys really knew what the world was they would be content to stay by the farm and grow up to the fullest possible stature of manhood there. The opportunities for improvement and culture at home are many fold what they were before the days of railroads and telegraphs. Everybody goes from the cities and towns into the country now. It is an excellent thing for the country dweller to frequent the large cities and catch their rapid-moving ideas, if not their ways, for it will certainly stimulate his spirit, enlarge or at least shake up his thoughts, and generally do him good. He goes home knowing that there he can make just as much of a world for himself as he requires, with far fewer risks to his happiness and peace.—*Mass. Ploughman.*

GREAT SALE OF LAMBS AT PERTH.—On Wednesday Messrs. Macdonald & Fraser held their first special sale of lambs for the season, when over 5000 were catalogued, the bulk of which were top crosses, and several lots of half-bred and Shropshire crosses. The attendance, which was one of the largest that has ever been at those sales, included, in addition to a very large number of buyers, many of the principal flock-masters, and others interested in stock. The sale commenced in York Place Park, at eleven o'clock, where about 4500 were sold, the remainder being sold at the mart, finishing at three o'clock. The lambs were much the same in quality and condition as at the corresponding sale last year. The fall, as compared with the prices then realized, which were extreme, was on half-breds from 8s to 10s, and on crosses from 6s to 7s a-head. The run of prices were for half and three-parts bred. Best class of tops, 21s 6d to 25s 9d; middling sorts, 18s to 20s. Shropshire crosses—the best class of tops, 18s to 23s 9d, middling sorts of same class, 14s 3d to 17s 6d. The bidding was steady from the beginning till the close of the sale, and towards the close prices rather improved, and many buyers, who expected that prices would range lower, went away without being supplied.—*N. B. A.*

IN VIEW of the famine which Minnesotians are suffering in consequence of the ravages of the grasshopper, the editor of the *Naturalist* gravely advises the people to turn to and devour the pests that are devouring them. From his own personal knowledge, he states that the grasshopper makes a very palatable article of diet, when killed by boiling water and fried in butter. Care should be taken, however, to cook the beast thoroughly, as it is apt to be infested with parasites that die hard—the hair snake, for instance, which, as we have heretofore mentioned, has a habit of occupying lodgings for a good portion of its life in the interior apartments of the grasshopper. In portions of Africa and Western Asia, and we may add western America, the grasshopper is eaten with great gusto. The Arabs, the Hottentots, and the Dakotas, take theirs roasted whole, minus the legs; or roasted, and afterward powdered and made into cakes. Various modes of serving grasshopper steaks might be devised by the ingenious Blots of the Minnesota plains; and, as necessity is said to be the mother of invention, no doubt the sharpened wits of a hungry people, once set at the task, would produce miracles in the way of grasshopper roasts and stews, not to speak of grasshopper sausage and grasshopper hash! A not secondary advantage resulting from this course of dietetics, would be the depletion of the hordes of voracious jumping-jacks that are now carrying all before them, save the starvation which they leave in their track.

OUR THANKS are due the secretary of the Kansas State Board of Agriculture for complimentary tickets to the State Show, at Leavenworth, September 7.

The Dairy.

Dairy Maxims.

Milk will sour quicker if the cows are fed sour milk. This is not objectionable for butter making, but it is objectionable for cheese making.

Cream from a farrow cow's milk will not all come if churned with cream from new milk cows. The mixed cream will make more butter than the cream from new milk cows alone, but not so much as if the cream is churned separately.

If I were receiving milk from low, swampy grounds, or from pastures filled with weeds, or from prairies, I would scald it. By heating to 150 deg. I would drive away the taint, but the scalding would also drive away the aroma of the timothy, clover, or June grass.

Cream can be raised by freezing, but this is not practised in this country.

If milk is kept at a low temperature, the cream rises slowly.

The effect of a sudden change in milk or cream is to injure the keeping quality of butter.

Whey, as it comes from the factory, invariably has a bad effect when fed to cows. If fed while fresh and sweet, it is not objectionable.

Raising cream by freezing does not expel the animal odor, neither does it destroy germs in milk.

The cream which rises first makes a better quality of butter than that which rises last.

The more aroma in butter, the less time it will keep. So with cheese.

In the spring I would work all the cream into the cheese, to ripen it sooner and make it better, and work it off at spring prices. Later in the season I would skim more.

The cream from ordinary cows can nearly all be worked into cheese. It could not be done with milk from the Jerseys or other cows whose cream rises slowly.

To avoid greasy butter, churn with pressure instead of friction. The dash churn brings butter by pressure and makes better butter than most other kinds of churns. Butter should also be worked by pressure instead of friction. The ladle or worker should not be drawn across the butter, but pressed down upon it.

Milk, while being scalded for taint, should be stirred.

Results favor shallow setting instead of deep setting. The amount of cream seems larger sometimes from deep setting, but it is owing to the fact that in deep setting the large globules carry with them considerable milk. The amount of butter from deep setting will be less than from shallow setting.—*Prof. L. B. Arnold.*

Soiling Cattle.

By the term soiling is meant the feeding of green feed in a stall. Turning cattle into pasture is only practicable where land is cheap and plenty. It takes about two acres of good grass land to feed a cow or steer in the usual way, because a good deal of the grass is tramped over and out, because cattle will not feed near their droppings. The same amount of land will produce food enough for three head of stock if it is mowed and fed to them in the yard or stall. Of course pastures in or near a city, where lands are worth from \$500 to \$1,000, will not pay.

Men who feed a great deal of stock, as well as those who have only one horse and a cow, can arrange for summer feed in the following manner, which will not only be found economical, but will also afford that change of feed so desirable for all kinds of domestic animals. Rye may be sown about the last of August or first of September. It sown thick—1½ bushels per acre, and on good soil,—it will afford some pasturage late in autumn for young stock (it ought not to be mown), but no horses or sheep should be allowed to crop it, because these bite too close. As soon as spring opens, and the ground—which has been ploughed the autumn preceding—is in condition, oats and barley mixed ought to be sown. By the 20th of April at farthest, if the season will at all allow, corn ought to be planted in drills, two feet apart and from six to ten kernels to the foot in the row. In addition to this there should be a good meadow of mixed grasses, say timothy, clover, red-top or herd grass, &c., in quantities according to the amount of stock to be fed.

Now, we commence by cutting rye as the first green feed, then perhaps the meadow grasses, next the oats and barley, and again meadow, and then we

commence by feeding the corn. Thus we have a succession all through the season and also a change.

It is worthy of notice that all these grasses are the better for being allowed to wilt before they are fed. If there is barn-room sufficient they may be cut and spread on the floor in thin layers a few hours before they are fed. This process evaporates part at least of the watery particles, and makes the feed more nutritious according to bulk, and avoids the danger to the stock of bloating and excessive flatulency.

Cattle that are soiled should be allowed exercise in a yard or lot affording ample room for all therein confined. As part of farm economy the manure—which should be gathered frequently and composed with turf and refuse—will form no inconsiderable item. And where it is at all practicable, the liquid manure should be saved also, and put upon the compost heap and spread in the autumn or early spring on that portion of the farm where it is most needed.

The writer knows full well that this plan of feeding stock requires more labor, but it will require but little knowledge of mathematics to show conclusively that near large cities, and in places where land is valuable for other purposes than pasturage, it is not only the best but the cheapest.

Long and quick drives to pasture and home again are very injurious to dairy stock; these will also be avoided. A dairyman should ever bear in mind that a cow in his business is simply a machine to convert provender into milk and cream and butter. He should study not only with how little feed he can extract the greatest amount of milk, but how much the cow can consume and convert into the richest of milk without injury to her constitution and general health. A cow is very much like a pantry or bread-basket; if you put nothing in, you cannot expect to take anything out.—*St. Louis Democrat.*

Apples for Milch Cows.

We learned when a young man, in our earliest attempts at farming for ourself, when we kept three or four cows, did the greater part of the milking, and marketed our surplus butter, that when we began to feed the cows fallen apples, they soon began to increase their yield of milk, and soon after there was an increased amount of butter to carry to market.

Ever since then, whenever we have had cows and cheap apples, we have not hesitated to give them a regular allowance, night and morning, undeterred by the cry that it would dry them up, for experience oft repeated had taught us to the contrary. Of course we always commenced with a small allowance, gradually increased until we reached the quantity that we thought best for them, and the results were always satisfactory.

A writer in the *Country Gentleman* gives his experience as follows:—

Every other year I have a large crop of apples, but as my orchard hardly has two trees of the same variety, the fruit is useless for market, and insects are so numerous that I have very few fair and perfect apples, but an abundance of cider apples, which will bring, after being picked and decayed ones thrown out, from twelve to twenty cents a bushel. For several years, against the remonstrance of my men, and of others who remember the old saying of "apples will dry up a cow," I have had them fed out to my milch cows, beginning with the early apples and continuing as long as they lasted. Several times I have dumped them from the waggon as gathered from under the trees, on a small piece of grass ground where the water will not stand, and on the approach of cold weather covered them with a thick coating of seaweed, so that they could not freeze, and have fed them nearly all winter to cows in milk. I have concluded from my observation, that the butter made from cows in winter, fed on apples, with good sweet hay, will be as good flavored and as high colored as June or September butter, and that the flow of milk is kept up, if not increased, at least as much so as from feeding meal to the same extent in value. For young cows they seem to me preferable to meal. Perhaps I should say that our winter milk room is so situated that its temperature seldom falls below 55°. Care should be taken, as in feeding other green stuff, not to feed enough to loosen the bowels of the animal much, but a bushel a day, or even more of ripe apples after the first few days, will not be too many. In a former number Mr. Levi Bartlett detailed his careful experiment of feeding apples to milch cows, with much the same result. I was glad to be confirmed in my impressions by so careful and accurate an observer.—*Rural Home.*

Keep up the Supply of Milk.

The season has been a very growing one for grass, and pasture during June and July has afforded a good return. During the latter part of July and up to the present, grass has shot up and become hard. This causes a general complaint; there is a serious shrinking in milk. The remedy is green, tender feed, such as corn and the second growth of clover. We just had a talk on the subject with Irving Moyer, of Dutchtown, who is a careful farmer and dairyman, who says his cows, owing to mature growth of his grass, shrink considerably, though there seemed to be no loss of flesh. He gave them a full feed of cut corn at night, and an increase in the weight of cheese became at once apparent.

This is a clear case, and is the experience of many. What is wanted for milk is green, tender feed, relished and easy of digestion. A good hay crop for winter feed has been secured. Much of it has been cut early, especially clover, the second crop of which is, in not a few instances, well grown up, and is just the thing to cut and place before milch cows, or, what some prefer, turn into the clover field. Almost anything to prevent shrinking of the milk. There is authority for saying that the loss in milk cannot again be restored the same season. At least there should be a stop made it possible to further shrinking. Another important point: As it is not unlikely we shall have some hot weather during August and September, the cut feed or bating should be done at noon or in the greatest heat of the day, sheltering the cows from the sun at the time, so as to avoid the injurious effect of the heat, which gets up a feverish condition of the system, and is communicated to the milk, and hence the cheese and butter are affected. All suffering, whether from the heat, lack of food or water, or any other way should be avoided, as it tells on the milk. Good treatment all round, making the animal comfortable and satisfied in all respects, is the way to reach the highest returns in the dairy. The time for this now is most urgent.—*Utica Herald.*

BUTTERMILK AND SCURVY.—The *Colorado Agriculturist* says: A correspondent informs us that he finds buttermilk to be an almost untailing cure for scurvy in hogs. To prove the fact, among other cases which have come under his notice, he says he owns several pigs which, a few weeks since, were suffering terribly from the effects of the disease, and that a speedy cure was effected by merely pouring the buttermilk over them a few times in the pen. Readers will do well to remember this simple remedy.

SALT AS AN AID TO MANURE.—About five o'clock one fine summer's morning, I noticed that where the salt had been sown the previous day, every grain of salt had attached to itself the dew, and formed on its surface a wet spot about the size of a sixpence, the ground being generally very dry. On our light lands it consolidates them and makes them especially firm and acceptable to the wheat plant, whose straw will stand firm and erect, although four and a half to five feet long. It is also unfavorable to certain weeds by this consideration. It prevents the ravages of the wire worm. It is especially favorable to saline plants, such as mangolds, whose ashes contain fifty per cent. of salt. I never sow guano, except mixed with its own weight of salt. Like everything else, it has, I am sorry to say, greatly risen in price. I observe that all crops seem to thrive well on land near salt water, especially where the land is drained.—*Western Rural.*

THE CAUSE OF THE POTATO DISEASE, AND THE MEANS OF ITS PREVENTION.—In the Biological Section of the British Association recently, Mr. J. Torbitt read a paper on "The Cause of the Potato Disease, and the Means of its Prevention." He contended that potatoes could not be cultivated for ever from the "set" or "cut," because the "set" or "cut" was merely a cutting from the subterranean stem; but they might be cultivated from the "set" until the expiration of the term of life allotted to the seed from which they were obtained—that was, provided they were not cut off by disease or other accident when they became old and approached the term of their existence. Upon this theory, therefore, the remedy was to revert to the operation of the laws of sexuality, and grow the plant from the seed so soon as the potato under cultivation from the "set" became unable to yield a full crop of seed, a result which would be found to occur in about, say ten years. Mr. Carruthers, of the British Museum, dissented entirely from the views propounded by the reader of the paper, and said that plants propagated from seed were just as liable to disease as those propagated from "set." He also mentioned that the disease threatened to be on a very extensive scale in Ireland in the present season.

Miscellaneous.

Household Hints.

Cucumber Salad

Take half a peck of green cucumbers, just fit for the table, remove their skins, and grate them upon a tin grater and let the pulp drain through a sieve for two hours. Add a tablespoonful and a half of salt, a tablespoonful of black pepper, a small pinch of red pepper, and a tablespoonful of ground mustard, stirred into half a coffee-cup of salad oil. Put the mustard into the cup and then turn on the oil slowly until it is well mixed with it. Take a quart of cold vinegar, and after mixing all the seasoning with the grated cucumbers, put it into glass jars and fill each jar full with the vinegar. Kept tightly sealed, this salad will last all winter, and prove a very agreeable addition to all cold meats, sausages, poultry, &c., for it retains the flavor of the fresh cucumber to a remarkable degree. The oil can be omitted if not liked.

Sliced Cucumber Salad.

Prepare a quantity of cucumbers, as if for a fresh salad, but slice them exceedingly thin. Put them in a strong brine for a couple of days. Take them out into a colander to drain thoroughly, make a salad dressing with the best of olive oil, mustard and black pepper. To do this take three tablespoonfuls of mustard, and one tablespoonful of white pepper, stir in two pint bottles of the oil very gradually, dropping it in as slowly as possible, but beating it all the time with a large silver spoon. When it is very thick add a large coffee-cupful of strong cider vinegar. Boil up a pint of vinegar, and turn over the sliced cucumbers, letting them stand in it until cold. Then turn that off, saving it for other pickling operations, and put the cucumbers into glass or stone jars (they look much prettier in glass), and turn in the salad dressing until every particle of the jar is filled with it. This mustard pickle is much relished by persons of weak digestive powers, and it will keep the year round.

Ripe Cucumber Salad

Take one dozen of yellow ripe cucumbers; wash and pare them; thin cut into strips and take out the seeds; chop them into bits as small as a pea. With them, or separately, as you please chop twelve large white onions and six large green peppers. Mix all well together, and add a teaspoonful of black or white mustard-seed and two tablespoonfuls of celery-seed. To this mixture stir in one teaspoonful of salt, and put the whole into a cotton bag to drain off over night. Next morning turn it out, put into jars, and fill up with the strongest of cold cider vinegar. Keep it tightly corked from the air, and in four weeks it will be a delicious relish, for either breakfast or supper. It looks very inviting, as it is white and crisp.

To Pickle Small Cucumbers and Gherkins

Select small specimens, and spread them on platters, covered with salt, and a small bit of alum in the centre of each platter, set it in a cool place for three or four days, then drain off the brine which has formed, and wash the pickles in fresh hot water, letting them drain in a colander. Put into a stone jar, cover them with boiling hot vinegar, in which a handful of pepper-corns and allspice has been boiled. Cover tightly with fresh grape-leaves, and set on the stove the furthest from the fire for an hour. Do not let them boil, but only be kept scalding hot. This will make them very green and crisp.

To Pickle Cucumbers

Select them as small as possible, and nearly of a size; wash carefully, place in a large jar or firkin, and pour boiling hot brine over them. Let them stand two days, turn off the brine, scald it, and pour boiling hot over the cucumbers. The next day drain them through a colander or sieve, and make a pickle with strong cider vinegar, putting a teaspoonful of black pepper, ginger and allspice, ground fine, to every quart of vinegar, and a tablespoonful of black or white mustard seed. Boil in a porcelain kettle. Put the cucumbers in a jar, and pour the vinegar, boiling hot, over them. If the flavor is agreeable two or three large onions, chopped fine, could be boiled with the vinegar.

To Salt Down Cucumbers

Gather the cucumbers every other day; wash in pure water, and put into a cask or firkin, in layers, covering them thickly with coarse salt between each layer. Keep a heavy, flat stone over them, so as to make the brine (which quickly forms) cover them. You need add no water, as there is plenty in the cucumbers. Fill up the firkin, and put it in the cellar. When you wish to pickle them soak in warm

water, changing it every morning and evening. Soak until the salt is sufficiently removed, which you can tell by tasting of one. Then put them into a porcelain kettle, with a little bit of alum, and cover with vinegar. Let them just boil up. Now turn into a jar and cover closely. If you desire the vinegar spiced proceed as in a receipt given above.

Sweet Ripe Cucumber Pickle.

Take large yellow cucumbers, pare off the skins and remove the seeds, cutting them in slices of half an inch in thickness, and when the seeds are out they will be in rings. Soak in strong salt and water over night; then pour boiling water on them, and let them stand an hour. Boil a quart of vinegar, to which add one coffee-cup of hot water, two of sugar, one tablespoonful of allspice, mace, cloves and cinnamon ground fine. A handful of raisins, or two or three bunches of nearly ripe grapes will improve these pickles. When the vinegar is boiling hot put in the rings of cucumbers, and let them boil until soft to the fork. Skim out on to platters, boil up the syrup for ten minutes, put the rings into jars, and pour boiling hot liquid over them. Seal tightly. They are a nice relish for the supper table.

Fried Cucumbers.

Take a ripe, full-grown cucumber, pare, and slice it a quarter of an inch in thickness. Dip each slice into a batter made of one egg, three tablespoonfuls of flour, and a little water, just enough to make a stiff batter. Fry in very hot lard, and plenty of it. Serve hot, with slices of salt pork freshened in sweet milk over night and dipped into the same batter. This makes a nice dish for breakfast.

To Pickle Cauliflowers.

Take the choicest and whitest cauliflowers you can procure, and pull or cut them into small bunches, let them lie on platters for twenty-four hours covered with fine salt. Then boil in weak vinegar and water until you can pierce the stems easily with a fork. Skim out the bunches and let them draw. Prepare the pickle with one gallon of vinegar, half a pint of sugar, one ounce of mustard-seed, one ounce of celery-seed, one tablespoonful of ground pepper. Boil for ten minutes, and pour it over the cauliflower, which should have been previously put into a large jar. Ready for use in two weeks.

Russian Bear

Pare and scrape ripe yellow cucumbers, and cut in round slices or square bits; let them stand in strong brine for twenty-four hours. Drain well, and scald them in a little vinegar and water, to which add a piece of alum of the size of a walnut. Prepare the pickle by adding two tablespoonfuls of whole allspice, the same of mustard-seed, one of black pepper, and a dozen small onions peeled. Boil it ten minutes, and pour over the cucumbers. Ready to use in three days.

How to make Indian Pickle.

This consists of all kinds of pickles mixed, and put into one large jar—gherkins, cucumbers sliced, button onions, cauliflowers, broken in pieces, radish pods, small string beans. Lay them on platters, and cover with salt for three days, then scald them in vinegar for a few minutes; skim out into the jar. Cut a large white cabbage into quarters and chop it fine, salt it thoroughly over night, and then add to the pickles. To one gallon of strong vinegar put four ounces of rice ginger, bruised, two of whole pepper-corns, two of allspice, four ounces of turmeric, one pound of the best mustard. The vinegar and all the other ingredients, excepting the mustard, must boil together for twenty-five minutes. Then strain it into a pan, put the mustard into a bowl, and wet it up with cold vinegar, mixing it until entirely free from lumps, adding the vinegar in small quantities. Then mix it with the spiced vinegar, and turn all the pickles into the pan, mixing them well together. Put them all into the jar and cover tightly. Ready for use in a week or ten days.—N. Y. Times.

Fish Culture for Farmers.

I often have letters inquiring how many trout one acre, or some other given amount, of surface of water will sustain. Now, this is the most difficult question that could be asked. The surface area of water has very little to do with it. All depends on the temperature of the water and the amount of flow. I have ponds large enough to sail or row on and cast the fly; but for raising trout for market, I am decidedly opposed to ponds. All my neighbors have canals fed by springs, and make more money than I do. Ponds freeze up in winter and heat up in summer. These extremes are not healthy for trout.

I can raise more trout in a canal dug out deep, and of a superior quality, than can be raised with the same water dammed up. Besides, we get rid of all risk of dam-breaking. Again, they are so much easier covered. By so doing more than double the quantity of trout can be kept in the same water. Some think trout need sunlight. This is a mistake. I have seen a pair of trout put into a well 20 feet deep, two feet wide, after three years taken out, when it was found they had gained one pound a year, which is as much as can be depended upon under any circumstances. Now take that for a standard. A canal of race 10 feet wide and 100 feet long would sustain 1,000 trout with little or no circulation, as a well has no circulation except that the water runs in as fast as it is drawn out, and no faster. But your canal must be covered and dug as deep as possible when you have no running stream, so as to keep the water cool. If you have one pond of water to turn in, by extending your canal, or, what is better, make several short ones, ten times as many trout can be kept. But in any and all cases, if you wish to keep all you can, cover your canals, except a pair of trap-doors at the upper end to be opened on sunny days, and for feeding. In covering canals lay your timber poles or plank just under the surface of the water, thus they will not rot, put on sod, or turf, cover at least one foot, by this method a springy meadow or swamp can be so thoroughly under-drained as to be suited for onions or anything you wish to raise. There is no loss of land, and five times as much in value can be raised in trout as can be raised on the surface. This is what I call underground fish farming. How far this process will pay you can determine by trying it on a small scale at first. I am sure there are hundreds that would do it if they were sure of success, pay or no pay in dollars and cents, simply for their own gratification and amusement. This is the only way to keep trout absolutely safe from poachers or thieves, as well as ducks, cranes, snakes, and, in fact, all other enemies to trout. Nothing herein contained is intended to discourage those having a plenty of running water flowage sufficient to keep a pond pure and healthy—ponds are very nice, and add not a little to the scenery and landscape—but only for those who cannot support an open pond, or for those that wish to utilize their water and land at the same time. I know of many houses that have, or can have, springs in their cellars. In all such cases, by digging say two feet deeper, and by laying a light floor, a family can raise all the trout they need for their own use with what curd, meat, &c., that would keep a dog, and at the same time afford endless amusement for all concerned.—Cor. N. Y. Times.

Sowed Corn for Stock.

From this time until frost shows itself those of our dairymen who have provided themselves with this crop will reap its benefits. No matter if the cows are running on good aftermath or natural pasture, I have always found that they would eat a large amount of green corn fodder. Leaving it for others to decide as to its benefits on theory, I have always made it a rule to have a half-acre for twenty cows, and have never regretted it, if the pasture is shortened by dry weather it turns an invaluable reservoir of nourishment for them, and no matter how good pasture they may have they will relish a change. If milked somewhat early they will eat a large amount before lying down, and will be found up and at work at the remainder early in the morning, and being full early are able to lie in the shade during the warm portion of the day.

By all means, drill in the corn at least three feet apart, and not more than one stalk to two inches on well manured ground. I know that many claim that they can produce more by having it thicker, but most of the failures in feeding this crop have been caused by too thick seeding broadcast, producing a weak, unhealthy and unwholesome growth of very succulent fodder, almost worthless as dairy food. I have found it best to have it so as to form small ears and not to feed it until fairly out in tassel; when I hear of a failure in feeding this crop I always make up my mind it has either been planted too thickly, or has been fed before it had attained sufficient growth to be nutritious; if early feed is used it is better to sow rye early in the fall.—Cor. Country Gentleman.

A ham well packed in pulverized charcoal, after the usual smoking, will keep for years. Butter in pots, well surrounded with charcoal, will keep for twelve months. Each atom of charcoal can absorb 1,000 times its bulk of deleterious gases.

Habits of a Man of Business.

These simple but excellent rules for the guidance of men in business, are just as applicable to the farmer as to the tradesman. For business habits and system are as necessary to the successful prosecution of the farmer's affairs as to those of the mercantile man. And orderly business habits, once formed, will never desert a man, no matter what his position in life, but will aid him greatly to conduct the minutest details to a happy ending.

A sacred regard to the principles of justice forms the basis of every transaction and regulates the conduct of the upright man of business.

He is strict in keeping his engagements.
Does nothing carelessly or in a hurry
Employs nobody to do what he can do himself.
Keeps everything in its proper place.
Leaves nothing undone that ought to be done and which circumstances permit him to do.

Keeps his designs and business from the view of others.
Is prompt and decisive with his customers and does not over-trade his capital.

Prefers short credit to long ones and cash to credit at all times, either in buying or selling, and small profits in credit cases with little risk, to the chances of better gains with more hazard.

He is clear and explicit in all his bargains.
Leaves nothing of consequence to memory which he can and ought to commit to writing.

Keeps copies of all his important letters which he sends away and has every letter, invoice, etc. relating to his business, titled, classed, and put away.
Never suffers his desk to be confused by many papers lying upon it.

Is always at the head of his business, well knowing that if he leaves it, it will leave him.

Holds it as a maxim that he whose credit is suspected is not one to be trusted.

Is constantly examining his books and sees through all his affairs as far as care and attention will enable him.

Balances regularly at stated times and then makes out and transmits all his accounts current to his customers, both at home and abroad.

Avoids as much as possible all sorts of accommodation in money matters and lawsuits, where there is the least hazard.

He is economical in his expenditures, always living within his income.

Keeps a memorandum book in his pocket, in which he notes every particular relating to appointments, addresses and petty cash matters.

Is cautious how he becomes security for any person, and is generous when urged by motives of humanity.

Let a man act strictly to these habits, when once begun, they will be easy to continue in, ever remembering that he hath no profit by his pains whom Providence doth not prosper, and success will attend his efforts.

Take pleasure in your business and it will become your recreation.

Hope for the best, think for the worst, and bear whatever happens.

A Chinese Goose Herd.

A man who has been to Peking, and who did some "peekin" to good advantage, gives this amusing description of a fowl-peddler among the curious street sights and street characters of that northern "celestial" metropolis:

And then there was the goose-rancher—a fellow who drove a hundred geese before him about the city and tried to sell them. He had a pole ten feet long, with a crook in the end of it, and occasionally a goose would branch out from the flock and make a lively break around the corner with wings half-lifted and neck stretched to the utmost. Did the goose-merchant get excited? No. He took his pole and reached after that goose with unspeakable *sanyfroid*, took a hitch round his neck, and "yanked" him back to his place in the flock without an effort. He steered his geese with that stick as another man would steer a yawl.

A few hours afterwards we saw him sitting on a stone at the corner, in the midst of the turmoil, sound asleep in the sun, with his geese squatting around him or dodging out of the way of asses and men. We came by again within the hour, and he was taking account of stock to see whether any of his flock had strayed or been stolen. The way he did it was unique. He put the end of his stick within six inches of a stone wall, and made the geese march in single file between it and the wall. He counted them as they went by. There was no dodging that arrangement.

Catching Woodchucks.

The *Newburyport Herald* relates the following story:

Woodchucks are a most intolerable nuisance in Rowley, some years cutting off half the pumpkin crop. One enterprising farmer made a formal declaration of war against them, and bought a dog that was reputed to be the champion woodchuckist. Bose did shake the life out of half a dozen of the varmints, just to show what might be done in a case of emergency, but his interest declined, and he didn't seem to take much stock in woodchucks. One morning at breakfast the farmer's little daughter, nine years old, told her father that she believed she could beat the dog at his own game, and he replied that she should have a quarter a-piece for all she would catch, and the champion's belt if she brought home more chucks for the next week than Bose did. Accordingly, after breakfast she went out with no arms except what nature had endowed her with, and no traps except her cunning hands; and within an hour returned holding what appeared to be the grandfather of all woodchucks—a perfect monster—by the hind legs, carrying him at arm's length, while he struggled to get free, and scratched and bit to the best of his ability. The farmer patted his daughter on the head in appreciation of her prowess, and then patted the woodchuck on the head also. The girl caught another in the afternoon, and within a week caught five, beating the dog and claiming the championship. Her *modus operandi* was simply to lie down at the back of a hole and patiently watch the appearance of its tenant, grabbing him by the nape of the neck as soon as his head emerged above ground. The farmer would dispose of the dog at a reasonable price, but that girl isn't for sale.

Poetry.

The old Barn's Tenantry.

By B. F. Taylor.

The rooster stalks on the manger's ledge,
He has a tail like a scymitar's edge,
A marsh's plume on his afghan neck,
An admiral's stride on his quarter deck,
He rules the roost and he walks the bay
With a dreadful cold and a Turkish way.
Two broadsides fires with his rapid wings
This sultan proud, of a line of kings,—
One gaiter'd laugh, four blasts of horn,
Five rusty syllables rouse the morn'
The Saxon lambs in their woollen tabs
Are playing school with the a, b, abs:
A, e, i, o! All the cattle spell
Till they make the blatant vowels tell,
And a half-laugh whinny fills the stalls
When down in the rack the clover falls.
A dove is waltzing around his mate
Two chevrons black on his wings of slate.
And showing off with a wailing note
The satru shine of his golden throat—
It is Ovid's "Art of Love" re-told
In a binding hue of blue and gold!
Ah, the burton girls that helped the boys,
The nobler Heleins of humbler Troys—
As they stripped the husks with rustling fold
From eight-rowed corn as yellow as gold,
By the candle-light in pumpkin bowls,
And the gleams that showed fantastic holes
In the quaint o'd lanterns, tattooed tin,
From the hermit glim set up within:
By the rarer light in girlish eyes
As dark as well, or as blue as skies.
I hear the laugh when the ear is red,
I see the blush with the forfeit paid,
The cedar corks with the ancient twist,
The elder cup that the girls have kissed,
And I see the fiddler through the dusk
As he twangs the ghost of "Money Musk"
The boys and girls in a double row
Wait face to face till the magic bow
Shall whir the tune from the violin,
And the merry pulses of the feet begin.

Money Musk:

In shirt of check and tallowed hair
The fiddler sits in the bulrush chair
Like Moses' basket stranded there
On the blink of Father Nile
He feels the fiddler's slender neck,
Picks out the notes with thrum and check
And times the tune with the nod and beck,
And thinks it a weary while.
All ready! Now he gives the call
Cries "Honor to the ladies." All
The jolly tides of laughter fall
And ebb in a happy smile.
"Begin." Do-w-n comes the bow on every string,
"First couple join right hands and swing!"
As light as any blue bird's wing
"Swing once and a half times round."

Whirl Mary Martin all in blue
Calico gown and stockings new,
And tinted eyes that tell you true
Dance all to the dancing sound.
She flits about big Moses Brown,
Who holds her hands to keep her down,
And thinks her hair a golden crown
And his heart turns over once!
His cheek with Mary's breath is wet,
It gives a second vomit set!
He means to win the maiden yet.
Alas, for the awkward dance!
Your stoga boot has crushed my toe!
"I'd rather dance with one-legged Joe,"
"You clumsy fellow!" "Pass below,"
And the first pair dance apart
Then "Forward six!" advance, retreat,
Like midges gay in sunbeam street
Tis Money Musk by merry feet
And the Money Musk by heart!
"Three quarters round your partner swing!"
"Across the set!" The fiddler ring
The girls and boys have taken wing
And have brought their roses out!
Tis "Forward six!" with rustle gracio
Ah, rarer far than—"Swing to place!"
Than golden clouds of old point-lace
They bring the dance about
Then clasping hands all—"Up, at and left!"
All swiftly weave the measure deft
Across the wool in loving waltz
And the Money Musk is done.
Oh, dancers of the rustling hulk,
Good night, sweet heart, 'tis growing dusk,
Good night for eye to Money Musk,
For the heavy March begun!
—*Scribner's Monthly.*

"PAPA, do you think Beech—" "Hush, Johnnie."
"But, papa, don't you think Beech—" "Did't
you hear me tell you to stop your noise, sir? I won't
have you talking about these things. Go in and get
your face washed." And Johnnie, with tears in his
eyes, wants to know why papa won't tell him
whether beechnuts are ripe.

TO GET A TIGHT RING OFF A FINGER.—Thread a
needle flat in the eye with strong thread; pass the
head of the needle, with care, under the ring, and
pull the thread through a few inches towards the
hand; wrap the long end of the thread tightly
around the finger, regularly all down to the nail, to
reduce its size. Then lay hold of the short end of
the thread and unwind it. The thread pressing
against the ring will gradually remove it from the
finger. This never-failing method will remove the
tightest ring without difficulty, however much swollen
the finger may be.

"HAYSEED" FOR EVER.—"My father was a
farmer before me, and I thank God that I am a
farmer born." Such was the soap Porter expected to
soothe the Grangers with, 4th of July last. It re-
minded Col. Geo. Stanley of the Illinois orator who
addressed a rural audience:—"Gentlemen," said he,
"I am proud to be one of you. My father was a
farmer, and I am a farmer born. Yea, I may truly
say that I was born between two rows of corn." At
this juncture a tipsy agriculturist at the further part
of the house hiccupped out:—"A (hic) pumpkin,
by—"—*Eldora, Iou., Ledger.*

POETICAL £ s. d.—Lewis Gaylord Clark many
years ago related the following anecdote of his
brother, Willis G., who when visiting an old acquaint-
ance, a farmer, at a time when albums were all the
rage, was handed by the daughter a superannated
account-book, ruled for pounds, shillings, and pence,
in which he was requested to write something pretty
for her; with which request he complied in the
following manner:

This world's a scene as dark as Styx,	£	s.	d.
Where hope is scarce worth			2
Our joys are borne so fleeting hence,			6
That they are dear at			18
And yet to stay here many are willing,			1
Although they may not have			

REAPING MACHINE KNIVES.—When the reaping
machines were brought from the Great Exhibition of
1851, and tried on my farm in the presence of a large
company, it was observed that the wheat being still
green, although in full ear, and the day wet, the
vandyked, smooth-edged knives could not cut the
straw; which, being wet and green, was doubled under
and jammed. Not so with the sickle-edged knives,
which made a clean and effective cut, so that the
machine completed its work. I find practically that
we cannot continue cutting after a shower with the
smooth-edged knives, and this is objectionable,
causing loss of time, especially in pluvial and uncer-
tain districts. I presume that the patents for the
sickle-edged are now out; if so, would it not be well
to make them all so? If there be any objections to
this I should be glad to know of them. I have used
a reaping machine for twenty-three years.—*J. J.
Mechi, August.*

THE SIXTH ANNUAL SALE
OF
MR. GEO. BROWN'S
THOROUGH-BRED
SHORT-HORNS
WILL TAKE PLACE
ON TUESDAY, OCTOBER 13, 1874,
AT
BOW PARK,

Three Miles from the Town of Brantford, Canada.

When will be offered for sale by Auction, without reserve, to the highest bidder, the following High-bred Cows, Heifers, and Bulls:—

COWS AND HEIFERS.

- SALLIE TAYLOR**, Sri, (American Herd Book, Vol. XII, page 1226). Red and White: calved 29th February, 1872. her Dam was *Sallie Taylor* 2nd by Abram Van Meter's famous Rose of Sharon Bull, *Dick Taylor* 5593: her Sire was Mr. Alexander's pure Duchess Bull *Fourteenth Duke of Airdrie* 7372: got by Mr. Samuel Thorne's *Royal Oxford* (18774) from *Fourth Duchess of Airdrie*: (Salho Taylor Sri was served on 16th Jan'y, 1874, by the pure Duchess Bull *Seventeenth Duke of Airdrie*—the bull sold on 19th September, 1873, at Mr. Samuel Campbell's & Co.'s, great sale, for \$12,000.)
- CAMBRIDGE 17TH** (Am. H. B., Vol. XII, page 595) Red and White, calved 11th January 1872. Dam *Cambridge 7th* by the pure Duchess Bull, *11th Duke of Thornedale*. Sire (imported) *King of the Ocean*, 8465, [1619].
- MABEL** (Am. H. B., Vol. XIII, page 755) Rich Roan, calved 1st January, 1872; Dam *Jennie* by *Young Ethelbert*, 18824, [295]; Sire (imported) *Grand Duke of Gordon*, (25757), 11216.
- LADY SCARLET** (Am. H. B., Vol. XIII, page 766). Red, calved 10th January, 1872; Dam *Princess* by *Kentucky Baron*, 18737; Sire *Canadian Boy*, 12619, [1066].
- ROSALIE**, (Am. H. B., Vol. XIII, page 803) Red Roan, calved 29th February, 1872. Dam *Jess Rose* by *Ardion*, Duke of Airdrie, 4150, [434]; Sire (imported) *King of the Ocean*, 8465, [1619].
- MINNIE**, (Am. H. B., Vol. XIII, page 803) Red with a little White, calved 15th February, 1872. Dam *Young Rosalie* by *Robin Hood*, 3358, [615]; Sire *Oxford Chief*, 15071, [1911].
- HESPER 5TH** (Twin with *Hester 4th*), (Canadian Herd-book, Vol. II, page 505) Red with little White; calved 20th March, 1872; Dam *Hester* by *Sr. William*, [603], Sire (imported) *Grand Duke of Gordon*, (25757), 11216.
- MYRTLE 2ND** (Am. H. B., Vol. XIII, page 827). White, calved 18th May, 1872; Dam *Myrtle* by *Butterfly 2nd*, 7637, [91]. Sire (imported) *Grand Duke of Gordon* (25757), 11216.
- FANCHETTE** (Twin with *Fanny*); (Canadian H. B., Vol. II, page 463) Red and White, calved 14th July, 1872. Dam *Fanny Pettit* by *Young Grimsby* [380]; Sire (imported) *King of the Ocean*, 8465 [1619].
- BEAUTY, 7TH** (Am. H. B., Vol. XIII, page —); Red, with a little White: calved 9th March, 1872; Dam *Beauty 4th* by *Garribaldi*, 17136 [203]; Sire (imported) *Grand Duke of Gordon* (25757), 11216.
- ROSIE**, (Can. H. B., Vol. II, page 772) Red and White, calved 27th July, 1872; Dam *Rose 4th*, (Am. H. B., Vol. X., page 825) by *Prior*, 7155 [589]; Sire (imported) *Grand Duke of Gordon* (25757), 11216.
- VERONICA** (Am. H. B., Vol. XIII, page 864) Red and White; calved 25th July, 1872; Dam *Virtue* by *Butterfly 2nd*, 7637 [91]; Sire (imported) *Grand Duke of Gordon* (25757), 11216.
- BELLE OF BRANT**: (Can. H. B., Vol. XIII, page 499) Red and White; calved 13th September, 1872; Dam *Batavia*, by *Ontario Chief*, 18772 [185]; Sire (imported) *Lord Harrington*, (31610), 17550.
- FANNY 6TH**: (Can. H. B., Vol. II, page 436) Rich Roan, calved 31st July, 1872. Dam *Fanny 4th*, by *Oxford Chief*, 15071 [1911]; Sire (imported) *Grand Duke of Gordon* (25757), 11216.
- BLANCHE 3RD**: (Am. H. B., Vol. XIII, page 458); Red, calved 2nd December, 1872. Dam *Blanche* by *Burnside 4918*, Sire *Clyton Duke 2nd*, 7711 [133].
- BRENDA** Red, calved 30th September, 1872; Dam *Bridget* (Can. H. B., Vol. II, page 375) by *Beauregard*, [48], Sire (imported) *Grand Duke of Gordon* (25757), 11216.
- PRINCESS LUAN 2ND**, (Am. H. B., Vol. XIII, page 868). Red, calved 6th January, 1873. Dam *Princess Luan*, by *Prince of Bourdon*, 7111; Sire, imported *King of the Ocean*, 8465 [1619].
- ROSALIND** (Amer. H. B., Vol. XIII, page 925) Red; calved 22nd November, 1872; Dam *Fianboro Belle* by *Young Volunteer*, 18816 [2394]; Sire (imported) *Lord Harrington*, (31610), 17550.
- ISABELLA 27TH** (Twin), (Am. H. B., Vol. XIII, page 465) Red, calved 27th December, 1872; Dam *Isabella 15th* by *Twelfth Duke of Northumberland*, 4744, Sire *Grand Duke of Cambridge*, 8250 [1402].

- ROSE OF BRANT** (Am. H. B., Vol. XIII, page 916) Red with a little White; calved 29th December, 1872; Dam, *Rose of Markham* by *Earl Duke of Oxford*, 6149 [530]; Sire (imported) *King of the Ocean* 8465 [1619].
- HESPER 7TH** Red Roan, calved 2nd April, 1873. Dam *Hester* (Can. H. B., Vol. 2, page 161), by *Sr. William* [593], Sire *Grand Duke of Gordon* (25757), 11216.
- BERTHA**, (Am. H. B., Vol. XIII, page 478) Red and White, calved 17th June, 1873. Dam *Betty 1st*, by *Ontario Chief*, 18772, Sire *Grand Duke of Gordon*, 18720.
- DAISY 2ND** (Am. H. B., Vol. XIII, page 531); Red; calved 3rd August, 1873; Dam *Daisy* by *Second Grand Duke of Clarence*, 8063 [1242], Sire *Packwick*, 15779 [2585].
- DIANA**: (Am. H. B., Vol. XIII, page 535). Red and White; calved 30th July, 1871; Dam *Mary* by the pure Bates Bull *Ethelbert* 18824, [295], Sire *John Tom*, 11231 [1721].
- FOREST QUEEN**, (Am. H. B., Vol. XIII, page 603) Red and White, calved 6th February, 1871. Dam *Lady Bedford* by *Van guard 18515* [259] Sire *Oxford Chief* 15071 [1911].
- VANDA** (Am. H. B., Vol. XII, page 823) Roan (Twin) calved 21st May, 1871. Dam *Rosalie* by *Sultan*, 15555, [7.3.], Sire *Oxford Chief*, 15071, [1911].
- LUNA**: (Am. H. B., Vol. XIII, page 754) Roan; calved 1st January, 1870; Dam *Lady Bedford* by *Van guard 18515* [259] Sire *Oxford Chief* 15071 [1911].
- GERTRUDE**, (Am. H. B., Vol. XIII, page 616) Red and White, calved 6th February, 1871. Dam *Young Duchess of Wethill* by *Garribaldi* 17136 [203] Sire *Cambridge 1129* [1066].
- RED ROSE OF PICKERING**, (Am. H. B., Vol. X., page 898) An 1 bull calf *President Pickering* at her side; Red; calved 13th October, 1869. Dam *Rose 4th* by *Clyton Duke 2nd* 7711 [133] Sire (imported) *Highland Chief* 6861 [1517].
- THE BELLE OF BIRNBROOK** (Am. H. B., Vol. XIII, page 924). Roan, calved 10th March, 1870. Dam *Rosetta* by *Captain*, 13550 [105], Sire *Eastern Prince* 13697 [1361].
- LAVINA**: (Am. H. B., Vol. X., page 637); Roan; calved 6th October, 1858. Dam *Wendy* by imported *Baron Solway*, 6132 [45], Sire *Duke of Bourdon*, 5510 [118].
- BARBARA**: (Am. H. B., Vol. XIII, page 453) White; calved 5th January, 1870. Dam *Louisa* by *Garribaldi* 17136 [203], Sire *Erasmobane* 12544 [1017].
- MARSHA**: (Am. H. B., Vol. XIII, page 771); Roan; calved 3rd March, 1869. Dam *Alabama* by (imported) *Clarendon*, 2332, Sire *11th Duke of Thornedale*, 5611.
- AGNES**: (Am. H. B., Vol. XIII, page 423). Roan and White, calved 7th March, 1867. Dam *Phoebe* by *Ethelbert*, 18824 [295], Sire *Burnside*, 18514 [1017].
- NEPHEE**: (Am. H. B., Vol. XIII, page 567). Red and White, calved 1st April, 1873. Dam *Young Rose* by *Brant*, 18616 [51], Sire *Duke of Marlboro'*, 5587.
- BUTTERFLY BLOOM** (Am. H. B., Vol. XIII, page 592), and bull calf *Oxford Butterfly* at her side. Roan, calved 20th May, 1867. Dam *Princess* by *Garribaldi*, 17136 [203], Sire *Young 2nd*, 7637 [91].
- YOUNG ROSALIE** (Am. H. B., Vol. XIII, page 811) Roan, calved 19th May, 1868. Dam *Beauty* by *Sultan* 15555 [718], Sire *John Tom* 11231 [1721].
- BALDGET**, (Can. H. B., Vol. II, page 322), red, calved 20th April, 1867. Dam *Bea* by imported *Van guard 18515* Sire *Beauregard* [48].
- YOUNG DUCHESS OF WOODHILL**, (Am. H. B., Vol. X., page 593) Red and White, calved 7th July, 1864. Dam *Duchess* by *Halton* (4552) 456, Sire *Garribaldi* 17,136 [203].
- MUSIC**: (American Herd Book, Vol. XIII, page 526). Red and White, calved 24th January, 1863. Dam *Lady Harrington*, 1194 by (imported) *John O'Gowan 2nd*, (1859) Sire (imported) *Baron Solway* 6132 [45].

BULLS.

- FREDERICK OF OAKLAND**, 1813, [2239]. Red and White; calved 3rd December, 1871; Dam *6th Duchess of Oakland* by *Plantagenet*, 6031, [521]; Sire (imported) *King of the Ocean*, 8465, [1619].
- FAMOSA CHIEF**, 17676, Red; calved 21th October, 1872. Dam *Famona* and *Miss Belle's* Sire of *Srd Duke of Airdrie*, (23717), Sire *Fourth of June*, 10070, [1111].
- BARON ROSE OF SHARON**, 16241, Red and White; calved 6th April, 1873. Dam *Rose of Sharon 2nd* by *Duke Duke*, 16659, 8335, Sire *Prince Audrie*, 8335.
- EARL BARRINGTON**, 17094, Red, with a little White, calved 16th February, 1873. Dam *Martha* by *11th Duke of Thornedale*, 5611; Sire (imported) *Lord Harrington*, (31610), 17550.
- EARL LOUAN**, 17093, Red and White, calved 15th July, 1873. Dam *Louan* of *Brant* by *Crown Prince of Athelstane* (21612) 5157, Sire (imported) *King of the Ocean* 8465 [1630].
- OLIVER PACHA**, 17855, Rich Roan; calved 27th January, 1872; Dam *Beauty* by *Canadian Punch* 5115 [108]; Sire (imported) *Grand Duke of Gordon* (25757) 11216.
- ROBERT THIR BRUCE**, 18193, Red and White, calved 2nd July, 1872; Dam *Muse* by (imported) *Baron Solway* 6132 [45], Sire (imported) *Grand Duke of Gordon* (25757) 11216.
- BARRINGTON BUTTERFLY**, 16217; Red; calved 10th February, 1873. Dam *Belle of Onedia* by *14th Duke of Geneva*, 7931; Sire (imported) *Lord Harrington* (31610), 17550.

- LORD BYRON** (Can. H. B., Vol. II., page 490); Red; calved 4th of August, 1872; Dam *Maude* by *Lord Duke 2nd*, 15741 [1671]; Sire (imported) *Grand Duke of Gordon* (25757), 11216.
- BALTHAZAR**: Red; calved 26th February, 1873; Dam *Helen* by *Young Volunteer* 18816 [2394], Sire (imported) *Lord Harrington* (31610), 17550.
- LUCULLUS**, 17617, Red and White, calved 1st January, 1873; Dam *Lucilla* by *Duke of Hamilton* 1947 [1269] Sire *Count Diamarc* 10560, [1154].
- BARON WOODHILL**, 16246; Red with a little White; calved 24th April, 1873; Dam *Duchess Srd* of *Woodhill* by *Butterfly 2nd*, 7637 [91]; Sire (imported) *Lord Harrington* (31610), 17550.
- LUKE OF LOCKNOW**, 16358, Roan; calved 2nd April, 1873; Dam *Rose of Lucknow* by *Knight of St. George*, (26541), 8172; Sire *Knight of St. George* (26541) 8172.
- EARL OF OAKLAND**, 17023; Red and White; calved 2nd June, 1873; Dam *6th Duchess of Oakland* by *Plantagenet*, 6031 [521], Sire (imported) *King of the Ocean*, [1619] 8465.
- SIR ACEN**, 18301; Red Roan; calved 22nd April, 1873; Dam *Daisy* by (imported) *Young Teesdale* 5288 [669], Sire (imported) *King of the Ocean* 8465 [1619].
- ELLIE DUKE OF AIRDRIE**, 16254; Red; calved 18th March, 1873; Dam *Kentucky Belle* by *Airdrie 2nd* 7459; Sire *Oxford Chief* 15071 [1911].
- ELM-ATHOL**, 16303, Red; calved 23rd August, 1873; Dam *Princess Belle 6th* by *Mae 8561* [852]; Sire (imported) *King of the Ocean* 8465 [1619].
- BARON BEDFORD**, 16205; Red with little White; calved 1st January, 1874. Dam *Julia Bedford* by *Louisa Duke*, 10250; Sire *Lord Strathairn* 15591, [1713].
- BRAEDAI BANE**: Red; calved 29th October, 1873; Dam *Beauregard* by *Beauregard*, [48]; Sire *Oxford Chief*, 17879, [1911].
- EARL MARSHAM**, Red with little White; calved 13th January, 1874; Dam *Rose of Markham* by *14th Duke of Oxford*, 6149, [530]; Sire *Oxford Chief*, 17879, [1911].
- STRATHALLAN CHIEF**: Red; calved 15th January, 1874. Dam *Rose Duchess* by *Roscieszko*, 10330; Sire *Lord Strathairn*, 17591, [1713].
- OXFORD BUTTERFLY**: Red with little White; calved 3rd May, 1874; Dam, *Butterfly Bloom* by *Butterfly 2nd*, 7637 [91], Sire *Oxford Chief*, 17879 [1911].

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