

Prize Essays.

Your editor has asked favors of you, and feels flattered with the responses that have been received. He thanks all who have kindly endeavored to aid him in giving useful information.

The request for articles on the cultivation of the turnip has brought forth writings from many of our subscribers. We find that the prize offered, although totally inadequate for the labor, has acted wonderfully. The value of the prize is of small account in comparison to the honor that would be attached to the recipient.—We do not take upon ourselves the responsibility of awarding the prize, but leave the decision in the hands of others whom we deem more competent to decide, and we will in no way interfere with the decision.

At the annual meeting of the members of the East Middlesex Agricultural Society we requested the appointment of one gentleman to confer with our assistant in awarding the prizes. Mr. Henry Anderson, the Secretary, was duly appointed.—He was so well pleased with the number and merit of the communications that he supplemented the prize offered by giving \$2 as a third one. We will not allow the second best article to go unrequited, so we award \$3 as the second prize. The giver of the first prize of \$5 does not wish his name to appear. We thank him for the very useful plan he has set on foot.

We propose to give more prizes for different subjects. We will give one of Vick's beautiful chromos for the best article on the cultivation of the carrot, and another for the best on the cultivation of the farmer's grape vine.

Articles on these subjects are to be confined to actual practice, such as the majority of good farmers might adopt.—Chemical analyses and technical terms are not necessary; they may be subjects of future discussions. The writings to be at this office by the 20th of February.

Disappointment.

How pleasant it is to meet with success. Our readers like it themselves; you may depend that we are pleased to send successful accounts to you of the Midge Proof, Deihl, Treadwell, Scott, McCarling, Farrow and other varieties of wheat. It gives pleasure to us and is profitable to you.

You are pleased to see your paper improved, and are glad to hear of its increasing circulation, but, notwithstanding the many pleasing features we have to chronicle from time to time, disappointment sometimes occurs. Perhaps it sweetens success when it comes.

As we promised our report on grasses, we reluctantly take our pen to write it under the above heading.

GRASSES.

Last year we imported varieties of grasses in order to see if we could find any that would be of advantage to our pasture and meadow lands. The Hon. A. McKellar kindly gave us permission to have some sown on the Asylum farm, near this city; they were duly placed under the charge of the proper authorities, and space was allotted them on land that had been well drained, manured and cleaned. We went to examine them twice during the summer, and were well pleased with the growth and appearance of many varieties, although some either failed to grow or died out after germinating. Several varieties appeared very luxuriant and healthy, and looked as if they would be of advantage.

In the autumn, after the first frost, we went with the intention of procuring specimens and making a report of them before the winter set in, but, to our chagrin, all the grasses were, through some neglect or carelessness, turned under, and nothing but the bare ground was to be seen.

We felt much disappointed at this result of our first attempt to benefit ourselves and our readers at the expense of

the Government. We do not despair, but trust that another trial will be made and that better reports will be forthcoming.—Fortunately we have more strings to our bow than one.

A RAY OF HOPE.

We give the following letter, as the writer had nearly all the varieties of grasses. We hope to hear a full account of them from this source. We have furnished seed to other gentlemen as well, but reports as to results have not as yet reached us. The following is a copy of the letter:

SIR,—I come before you as a delinquent. Last spring you sent me one peck of a very valuable garden pea, of which I have forgotten the name. You asked me to sow them for you, which I did in a suitable piece of land. They did remarkably well, being covered with long, well-filled pods, and ripening at least two weeks earlier than any other pea we have here.

I cut them at the proper time, and all would have been well had not a careless man left the gate open for the benefit of 100 sheep and lambs who seemed to know what I valued most in the field, for, although they had two other kinds of peas, white beans, wheat and carrots to choose from, they went for your garden pea.—Now, sir, what is to be done? I have only about a bushel left after all my trouble.—What I propose is that you should set the price of the peck of peas, which I am ready to pay you.

I sowed the English grasses you sent, and they are going through a severe ordeal this winter. I hope to write to you in the spring to report how they stood the test.

I enclose \$1, my subscription for 1873. I could not get on at all without your paper, for which I have quite an affection.—The Bresse's Prolific potatoes have done remarkably well. Yours truly,

SHIRLEY GOING.

Wolfe Island, Jan. 7th, 1873.

We will both pocket the loss done by the sheep. If you have no objection, you might sow the bushel next season, and we might spare a few quarts to the public.—We should be pleased to receive your report on the grasses.

STILL IMPROVING.

We also obtained permission from the Bishop of Huron to allow his gardener at the Hellmuth Ladies' College to sow some flower seed for us. His report has been published. His farmer, Mr. Brett, also sowed various garden and field seeds and roots, but we did not place any grass seeds in their hands.

We publish the following pleasing communication in connection with this article:

SIR,—In reply to your question about seeds and implements, the seeds I got from you all turned out first rate, except two kinds of potatoes—the Australian and King of the Earlies; they are both too small and do not yield enough to suit me. But the Peerless variety makes up for everything; they are good; they yielded a much larger return than any other varieties I have, and I am so pleased with them that I shall plant them in preference to any other variety.

The mangolds, carrots and turnips were most satisfactory. One kind of turnip, the white-fleshed, grew the largest. I think it a fine variety.

The reaping machine I would not exchange for any I have yet seen. I am glad I went to see you before purchasing, as I was almost persuaded to take one from a travelling agent. W. B.

Importance of the Butter Trade.

Of the amount received annually by the farmers of Canada for butter we have no returns, but we know it must be very large and of great importance to the country. It is computed that the aggregate value of the dairy products of the States, taking the official statistics as the basis of

calculation, cannot fall short of six hundreds of millions of dollars annually.—The official returns for butter, milk and cheese, amount to nearly two hundred and forty-two millions, eight hundred and twenty thousand dollars; this is exclusive of factory cheese, of which the returns had not been received at the time of making the report. There is also, not included in the report, the very large amount consumed by the producers themselves; as this cannot be summed up in the sales of which it forms a part, nor of it is any account kept. From the returns from official sources, as above, the total estimated value is, as stated, six hundred millions.

If we estimate the amount received for the products of our dairies in Canada from the data given above, in proportion to the relative population of each country, it would give us in round numbers about fifty millions of dollars. In an industrial pursuit of such pecuniary importance as this is, a strict attention to all the details of the dairy department would doubtless add very much to the wealth of the country.

Caution.

Canadian farmers have been progressing favorably for several years past. We have profited at the expense of other countries; great improvements have been carried on both by public and private means; the coffers of our Government are well filled with cash; many farmers have a good bank deposit; property of all kinds commands high prices, and everything, apparently, is progressing very favorably.

Let us raise the curtain and take a view of the future. The British markets are our guide. The unsettled labor question that already caused the failure of many very large and wealthy farms in Europe; it has shaken the confidence of some of our manufacturers; it has caused a rise in everything we require.

The prospects of the British wheat crop for 1873 is most discouraging. It is already computed that it will be less than it has been for the past twenty years.—This year the potato crop alone in Great Britain falls short one million, four hundred tons—equal to forty million dollars. The potato bug has, in a great measure, prevented us from profiting by this great loss.

OUR WHEAT PROSPECT.

Our wheat, which looked remarkably well when the snow covered it on the setting in of winter, is now in a precarious position. The thaw and heavy rains that set in between the 8th and 14th of January, turned the snow into water, and the frost setting in again before the water could escape, has coated the wheat fields in this locality with a sheet of ice. This is one of the most dangerous positions our wheat can be in, and we fear much damage may be done to the plant.

At the same time we do not say that our prospects are hopeless. Our wheat crop is in a position of great danger, but all that is in danger is not lost; it may yet do well. But threatened danger should make us act with prudent caution in all our speculations.

If our wheat should be a short crop, a depression will affect the money market, and many enterprising farmers may fail unless they act with caution in entering into liabilities. Land has gone up to a high price, and many are purchasing to hold.

We would suggest that greater caution be taken this year than usual. Remember the old adage: "After a storm comes a calm," and *vice versa*. You have had a long calm lately. Put a reef on the expenses in time. There are not many of our readers that may require this hint, still some may perhaps heed it when too late, as we are impressed with the belief that a depression in the value of most kinds of property will take place before many months pass away.

A Proposed Tax on the Improved Estates of the Country.

A TAX ON FARMERS.

We have before us a programme of recommendations and resolutions to be presented at the annual meeting of the Board of Trade, at Ottawa, 15th January, 1873. In this official programme it is proposed that a revenue of at least one mill per dollar be levied on the improved estates of the country. That this tax on industry (for such it undeniably is) is unjust, oppressive and unnecessary, must be evident to every one who gives the matter the slightest consideration. The owners of these estates, the proprietors of these cleared and improved farms, to whom we especially refer, are indebted for these improvements entirely to their own industry. Their own strong arms and indomitable perseverance have changed the wilderness into fertile fields. By their labor the forest has disappeared and fields of wheat and well stocked pastures bear witness to the industry of the owners. The wigwam has given place to the comfortable farm-houses and barns. And now comes the proposal to levy a tax on these improvements, the fruits of hard, incessant toil.

It would be doubtless a judicious measure to levy a tax on estates, but it should be on those that are unimproved. It should be one that would tend, not to discourage industry by laying a burden on improvements, but that would compel the owners of unimproved estates to contribute towards the revenue of the country. There are tracts of land in every section of the Dominion, owned by individuals and by companies, unimproved, and preventing improvements in their vicinity. On these estates a tax should be levied, not only to pay for their protection, but that their proprietors might thereby be brought to improve them, or to dispose of them to others who would make the improvements so conducive to the prosperity of the country.

But this short-sighted legislator, the proposer of this tax on labor, gives his reason for the measure—"It is in consideration of their protection and increase in value." The protection of our properties, of our homes and all that make our homes happy, depends not so much, in our Dominion, on standing armies and wealthy exchequers, as on the fidelity and bravery of her people. They know the privileges they enjoy, and they will maintain them. The yeomen of Canada "Have hearts resolved and hands prepared, The blessings they enjoy to guard."

But the unimproved and unoccupied estates are a source of weakness to the country. On these there are none to contend for their country in the hour of need, were such a day to come. And this is a reason why a tax should be laid on them, and not on those whose owners have improved them by years of hard toil. And the improved lands contribute much in every way to the prosperity of the country, the unimproved contribute nothing but are a source of weakness. "The increase of value," a reason for the proposed tax, is the product of the farmers hard labor. The tax may be well called a tax on labor and industry.

Let us look at the matter in detail, as it actually exists before our eyes:—Here are two adjoining townships, or two "estates" in one township. One is improved, the other unimproved. From one the bush has disappeared. For years it has produced wheat, beef and pork for the neighboring markets and for export, adding every year to the wealth of the country. The owner has erected buildings on it where he and his family have lived and labored, purchasing in the country what they needed, thus adding continually to the revenue. His sons are enrolled in the militia, the strength and protection of the Dominion. The other estate is still unimproved—it is as both farms were a few years since, a wilderness. From it not one dollar has been contributed to the revenue of the country—not one aim raised in de-

fence. It is tempted—this improvement profit is to labor or neighbor. pose additional farm, on a levied.—A

P. S.—Board of and though by the means of its own still deem such measures to the country a be on our to legislate of this He is de snake is measure of modify the products of in our next to keep fr agricultural terests of gross are must resign Asst. Ed.

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fence. The proprietor holds it on, till he is tempted by a high price to dispose of it—this increase in price being caused by improvements in the neighborhood. His profit is to be obtained, not from his own labor or industry, but from that of his neighbor. And now it is proposed to impose additional taxes on the improved farm, on the other no such taxes is to be levied.—Asst. Ed.

P. S.—Since writing the above the Board of Trade have held their meeting, and though the proposal was not adopted by the meeting, notwithstanding the efforts of its author, Mr. Wilkes, of Toronto, we still deem it our duty to protest against any such measure as impolitic, unjust and inimical to the interests of the farmers and the country at large. It is well that we be on our guard to oppose every attempt to legislate against farmers, as the promoter of this scheme seems desirous of doing. He is defeated for the present; but the snake is not dead but scotched. The measure embraced in that resolution to modify the duty on breadstuffs and other products of the soil, we propose to take up in our next number. It is our great desire to keep from the politics of party in our agricultural writings, but when the interests of farmers, and capability of progress are assailed, or even threatened, we must resist them firmly and fearlessly.—Asst. Ed.

Farmers' Clubs.

We have received several letters from different sections of the country asking our advice about the formation of Farmers' Clubs, and inquiring what would be a suitable constitution. To some of them we have written in reply. We will now give a general reply that may answer all. The constitution and by-laws of such a club may be very simple. In all such cases the fewer and less complicated the rules are the better.

Some such constitution as we here give will be sufficient for a Farmers' Club:—

1. This meeting shall be called the Farmers' Club.
2. The object of this Club is the improvement in agriculture, both in the science and practice of its members.
3. Other members may be admitted by a vote of two thirds of the members present at any regular meeting.
4. The meeting of the Club shall be held fortnightly, or monthly, or otherwise, as may be deemed advisable. Its officers shall be a President, Vice-President and a Secretary.

The members of the club will determine for themselves when and how often their meeting shall be held. They can also, if they think it better, appoint a Board of three or five Directors. Their place of meeting may be a section school-room, but we would think it better if they met at the houses of the members alternately. As a Farmers' Club, unlike an Agricultural Society, will be composed of few members, a very good number being from twelve to twenty; their meeting at the houses of the members will give it more of a social character, besides it will tend to make the families more interested in farm life and farm work, teaching them the importance of agricultural science as well as practice. It is very desirable that our young men should know and prize the professions of farmers.

At each meeting a subject should be chosen for especial consideration at the preceding one; and it would be well if one of the members was appointed to read an essay on it, either original or not, then let the subject be thoroughly discussed. To be well conversant with the subjects, the reading of good agricultural papers will be a valuable aid, and also of any agricultural book available; and, above all, that knowledge that is only to be acquired by the experience and careful observation of the working farmer. The experience of actual life and diligent practice is the best school. Though having studied farming ourselves as a science, we are more indebted to our many years acquaintance with its actual

working than to all that books have taught us on the subject.

It would make those club meetings more social, and add much to their pleasure, if the mistress of the house in which they meet for the time, were to give the members a lunch, a cup of tea, a pie, or anything readily procured—*pot-luck* we have heard it called. We know what genuine hospitality is, and if each in turn be the hostess, it will increase the interest of the proceedings, and ensure permanence in their well doing.

In another column will be found a sketch of the working of a Farmers Club elsewhere. We will be glad to hear from our friends of the formation and progress of their clubs.—Asst. Ed.

Agriculture.

THE VALUE OF LEAF-MOLD IN POTATO CULTURE.

In reference to the value of decayed leaves in the cultivation of the potato, Mr. Talbot de Malahide, Malahide Castle, writes as follows to the Irish Farmers' Gazette:—

"I think it is the duty of every landowner to communicate any fact which has come to his knowledge which is likely to be of service to the agricultural community. I will therefore give the result of my potato-digging. I have about an acre and a half of Scotch downs which I have just lifted. They are in very good condition, and will weigh, I am told, upwards of ten tons. There are very few bad ones among them, and I understand that it is one of the best crops in the neighborhood. The curious part of the case is, that last year, in order to swell my manure heap, I carted an immense quantity of leaves, and mixed them with the farm-yard manure. This I have used both with the potatoes and root crops with the best effect, and the leaves appear to have had a powerful effect in preserving the potatoes. All the parties concerned with the digging of them have been struck with this fact."

WHAT IS GOOD FARMING?

In an address delivered to the farmers of New Jersey, by the Hon. James W. Wall, he alluded to the enormous increase which has taken place of late years in the agricultural produce of England. Less than a century ago the entire production of wheat in this country fell short of 16,000,000 bushels. In 1870 the yield exceeded 100,000,000, averaging thirty bushels from each acre devoted to this staple. Mr. Wall pointed out the direct agencies by means of which this increase was brought about by English farmers.

In the first place, he said, it is to be found in their systematic attention to all the requirements of good farming, in the skill and exactness with which all the operations of plowing, harrowing, clod-crushing, burning and scarifying are performed; in the perfect condition of "tilth" to which they bring the land preparatory to the reception of the seed; in the careful selection of the best varieties of seed wheat; in the extensive and prudent use of their barn-yard manure; in the perfection of all their instruments of tillage; the strength and discipline of their draught animals; in the assiduity with which they extirpate every weed and remove every rock that can interfere with the cultivation of the land. Nothing is left to casualty or chance.

No expectations are indulged that the bounty of Providence in an unusually favorable season will atone for their shortcomings and neglect. Everything which human foresight, scientific skill, intelligence, well-directed labor and mechanical aid can accomplish is done, to ensure the highest yield from the land. It is next to be seen in the extraordinary liberality

with which they restore to the earth, by means of purchased manures, all those elements of fertility which are exhausted in the process of cultivation.

It is estimated by chemical analysis that wheat absorbs forty of every hundred parts of nutriment contained in the soil. Now some idea of the enterprise of English agriculture may be formed, added Mr. Wall, when I state to you that in a single year, the year 1837, the first year of its general use as a fertilizer, the foreign bones imported were valued at the custom house at \$1,500,000, since which it is estimated that the amount paid for imported bones alone amounted to \$150,000,000. Since 1841 upwards of 1,500,000 tons of guano have been used.

Mr. Wall also spoke in high terms of the English system of drainage and the rotation of crops. "I believe," he remarked, "that nothing more perfect in rural economy can be conceived than their rotation of root and grain crops. The root cultivation has indeed been the salvation of England. With as much truth as force has it been said that the power of the British empire rests upon her coal, her iron and her turnips."—*Live Stock, Farm and Fireside Journal.*

AGRICULTURAL EXHIBITIONS.

If a man goes to one of these exhibitions with his eyes open, he will learn more than in any other place, the importance of combining brain and hand labor. It is by the application of brain labor that the horses, cattle, sheep and swine have attained almost a state of perfection. By spending a day among the best specimens of these animals, a farmer even of moderate brain capacity will learn the ways and means of improving his own stock, and of raising larger crops at a less expenditure, and gain much other very useful information.

The occupation of the farmer develops the whole man. Though he may not know it, or be able to define any of the sciences, he must, to some extent, become a chemist, botanist and naturalist; this, too, while working year after year without opening a book on any of those subjects. Labor and thought should go hand in hand, lending their aid to each other. And as he labors and thinks, he will occasionally catch an idea of the source of that sunshine that lights up even the log cabin, as nothing but a faithful and loving wife can do. It is as much a duty and should be the pleasure of the farmer to seek, by all laudable means, to increase and prolong these beams of sunshine, as it is to provide food and shelter for those dependent on him.

As a means to this end, he should encourage every effort made by wife and children to make and exhibit at these gatherings such articles of utility and taste as may come within their means.—They doubtless would like to go and enjoy becoming part and parcel in these agricultural jubilees. What a change from the routine of daily toil to ride a few miles to see what others have done in the various departments of industry, and learn at what trifling expense many things can be made that will contribute to the convenience and adornment of the house.—*Lansing Republican.*

TO SEPARATE LIGHT GRAIN FROM GOOD.

A correspondent of the American Artisan suggests the following plan:—

For wheat, take lye from wood ashes, strong enough to bear up a potato. Pour the grain into the lye, skim off all that floats, pour off the lye. The grain can be rinsed if thought best, or it can be dried for sowing. It will not hurt the grain if it is not allowed to remain in the lye.—The grain should be spread so that it will dry quick. This method of treating grain not only removes light weight, but destroys insects or their eggs that may be in the grain. For lighter grains make the lye less strong.

LIQUID EXCREMENT.

A cow, under ordinary feeding, furnishes in a year 20,000 lbs. of solid excrement, and about 8,000 pounds of liquid. The comparative money value of the two is but slightly in favor of the solid. This statement has been verified as truth over and over again. The urine of herbivorous animals holds nearly all the secretions of the body which are capable of producing the rich nitrogenous compounds so essential as forcing or leaf-forming agents in the growth of plants. The solid holds phosphoric acid, the lime and magnesia, which go to the seeds principally, but the liquid, holding nitrogen, potash and soda, is needed in forming the stalks and leaves. The two forms of plant nutriment should never be separated or allowed to be wasted by neglect.

The farmer who saves all the urine of his animals, doubles his manurial resources every year. Good seasoned peat is of immense service to farmers when used as an absorbent, and the stalls of animals should be so constructed as to admit of a wide passage in the rear, with generous room for peat to be used daily with the excrement.

A NEW STEAM PLOUGH.

The Scottish Farmer of Nov. 18, makes mention of a new steam plough and subsoiler combined, just turned out of the Banff Foundry. The inventor is G. W. Murray, and it was made for L. Livingstone Learmouth, of Linlithgow. It is made of Swedish wrought iron, so that it can work among the stones and rocks of Scotland, steel ploughs there being too much addicted to the breaking of shares, "skifes," &c.

The principal new feature of this plow is that there is a combination of the common plough and the subsoiler, or it can be used for ploughing without subsoiling. This particular implement cuts three furrows as a plough simply, or two with the subsoiling apparatus attached. The subsoiler loosens the soil in the furrow from 3 to 9 inches, as desired; it simply breaks up or loosens, without bringing the subsoil to the surface. The cost of the implement is £125, or \$625. This of course does not include the cost of the engine for running it.

FARMS AND FARM LABORERS.

Another serious drawback to agricultural labor is that there are too many farmers; or, rather, that there are too many men in the farming profession. I do not believe there are in the United States, this day, ten farmers out of every hundred who make more than a bare living. I myself would not work for a man who did not farm on a profitable basis. I should know that I would not reap any advantages in any shape. What we want is intelligent labor, not merely brute force—labor that will know how, when and where, the cause and effect; mind and swelling muscle acting together. It is foolish to think that such can be had for the small pittance of twenty or thirty dollars, when other branches of business hold out greater inducements.

But some will say that farming cannot afford such expensive labor. I think it will. Those who cannot make their farms profitable enough to pay intelligent labor, must be satisfied to go on with such as has strength enough to hold the plow handles and follow the horses. With all our improved agricultural machinery, intelligent labor is not, nor will it be, equal to the demand. Farming must be carried on in the future more as a business and not left open to every adventurer who has failed in everything undertaken and jumps into farming as the last resource.—We see it every day—men buying farms who can hardly tell an ox from a cow, thinking if they cannot do anything else they can farm. If such thought at all they would know that to be a successful farmer needs as much tact, energy and business qualifications as any trade or occupation existing.—*Cor. in Moore's Rural New Yorker.*

THE POTATO IN NORTHERN NEW YORK.
[Extracts from remarks made before the Jefferson County, New York, Farmers' Club, by W. R. Skeels.]

I have but very little to say upon the cultivation of the potato. My experience cannot differ materially from that of most persons present. I should consider it useless to tell a man whose land was composed of clay, that only a light loam would do, or one who had a sandy farm that he must have heavier soil. Yet, the nearer we can meet the meaning of these two points the better results may we expect; whether the effect is produced by underdraining on the one hand or the introduction of vegetable mould on the other, depends upon the condition of the soil.

Each year adds to my conviction that we waste a large per cent. of our seed. If you select good, fair-sized tubers, cut them to single eyes; every eye will grow and produce a good healthy plant. If planted whole, but three or four will ever grow. It will take three times the seed to produce a like result. * * * My experience has been more varied in varieties than in cultivation. I shall consider the merits and demerits of those varieties that have been introduced during the last five years.

Early Rose.—In January, 1868, B. K. Bliss & Son called the attention of the public to a new seedling called the Early Rose, a seedling of the Garnet Chili. They claimed for it wonderful points as regards earliness, productiveness, and good table qualities. No potato ever introduced was so generally sought. Cultivated under such a variety of conditions, it is a wonder that it meets with such almost universal success; and, taking all things into consideration, it may be safely pronounced "the potato for the million." Others excel it in special points, none in all.

Bresee's Prolific.—In January, 1869, Messrs. Bliss & Son introduced Bresee's Prolific, also a seedling of the Garnet Chili. It is a superior-looking potato, smooth, slightly russett, a little lighter colored than the Early Rose, from three to four weeks later ripening. With me it has proved the most successful variety for field cultivation of any I have tried; it succeeds upon a much poorer soil than the Early Rose.

Excelsior.—In 1869, J. J. H. Gregory introduced the Excelsior, a seedling of the State of Maine potato. It is a white-skinned potato, of medium size; for three years it has proved quite productive, of excellent table quality, and not as healthy as the Prolific.

King of Early's.—Is the finest looking potato I have seen; is healthy and quite productive. In 1870-1871 it was a poor table quality; this season it has been good, fully equal to the Early Rose. I never could satisfy myself that it was any earlier than that variety.

Peerless.—The most productive of Bresee's Seedlings. I have never succeeded in growing a crop of even fair table quality, though I have heard of crops being excellent. Upon our farm it only excels the Harrison in productiveness.

The present season has marked the introduction of two classes of Late Roses—one a sport, the other a seedling.

Thorburn's Late Rose.—A sport of the Early Rose—I planted by the side of the Early Rose. It was five days later coming up, fifteen later to bloom; tops remaining green from three to four weeks longer. In point of yield there was no perceptible difference; five pounds of seed produced 173 pounds. I noticed quite a number of hills, the tops of which ripened quite early. There was no mixture of seed, as I cut each potato to single eyes, and dropped all of one before cutting another. Where this tendency to ripen earlier is noticed, the hills should be dug and carefully removed before the main crop is dug, if intended for seed.

Campbell's Late Rose.—A seedling raised by G. W. Campbell, of Ohio. In general appearance it resembles the parent

potato, though not as uniform in shape or size. It is decidedly a late potato, the tops remaining green until killed by frost late in October. It is a very strong growing vine, showing the least effect from drouth of over fifty varieties growing in the same plot. Last season I was inclined to cry "humbug" when I read the claim that it would yield from two to three times as much as any potato grown. I tested it in a small way with the Peerless, selecting one pound of each as nearly uniform as I could; divided each pound into forty-five pieces, planted in parallel rows. The Peerless showed signs of ripening September 15, and was dug; yield, forty-nine pounds. Campbell's Late Rose was green when dug, October 1; yield, seventy-one pounds. No attempt was made to force the latter kind; no manure used, as I desired to ascertain what might be expected in ordinary field cultivation. Ten pounds of Campbell's Late Rose produced 317 pounds. * * * * *

What causes the roughness of the skins of potatoes, giving them the appearance of having been eaten over by some small animal or insect? We have always been led to think it was the angle worm. I am satisfied that it is not; that it is a disease caused by some chemical action of the soil; that though the angle and wire worm may take advantage of the softness caused by the removal of the skin to feed upon the tubers, they are in no way accountable for the condition of the potato.

While the potato rot is destroying the crop in Europe, the Colorado Bug is busy with us. Slowly but surely has it been working its way East from the Rocky Mountains; already it has reached the borders of this State, and its introduction here may be considered as but a question of time. Then, eternal vigilance and Paris Green will be the price of potatoes.

WHAT EIGHTEEN ACRES PRODUCED.

Under the head of "Practical Experience" I read with much interest A. R. K.'s article showing that farming, if well done, will pay. I will now give you my experience for the present season on a farm of 72 acres, 18 of which were cultivated. My corn fields consisted of 9½ acres, 8 of which were plowed for the first time, it being used for a pasture over 40 years. Many old logs had been permitted to remain on it until April last, when, with boys and teams, we pulled out the stumps and made a clean thing of it. It was rather a flat piece of ground and wild grass had got possession of a good part of it. Not having a team sufficient to break the turf (it being very heavy) I let it out for one-third of the crop. Plowing was finished about the 23rd, and planting finished the 25th of May.

From the time it was planted a hoe was not taken into the 8-acre field, and the cultivator passed through each way once only, about the middle of June. Now for the result:—680 stooks were set up, which produced a bushel apiece, making 680 bushels. I put in, and worked myself, 1½ acres on old cultivated ground which was heavily top-dressed with manure, well cultivated and hoed twice, the product was about the same as the 8-acre field; thus you will see that old pasture land without manure is equal to old worked land with manure. The product of the 8-acre field may be thus summed up.

680 bushels ears of corn, at 40c.....	\$272 00
280 stooks corn fodder, at 10c.....	68 00
8 loads pumpkins, at \$2.....	16 00
Total.....	\$356 00

The 8 acres brought me.....	\$118 66
Each acre.....	68 00
Labour expended, at.....	85 00

Leaving a clear profit of \$152 to the man who did the work; so you see that farming can be made profitable if rightly conducted. Potatoes raised, 100 bushels, on about half an acre of ground, which was also turf, same as corn land, only more elevated and dry; no manure, twice cultivated and hoed; varieties, Peach Blow and Early Rose. Product, \$60 or \$120 per acre.

Labor expended, \$12; nett profit on half acre, \$40, or \$80 per acre. Oats, five acres; yield, 160 bushels, or 32 bushels per acre; product, \$64, or \$12.80 per acre; cost of seed and labor, \$24, leaving \$44 for use of lands. The yield of oats is but ordinary, as it had been cropped three years, and was seeded with grass seeds with the oats.

My system of farming is to plow as deep as my team will permit, thorough harrowing and clean cultivation. I also raised 1½ acres corn fodder, sowed in drills 2½ feet apart, dropped in a furrow and covered with harrow drawn lengthwise of the furrow. Product about 4½ tons, with fully a peck of nubbins to each shock. I estimate the worth of the crop at \$50, as hay is worth here now \$20 per ton; cost of putting in crop not over \$8. I consider this the best crop that the farmer can raise for his own use.

Summing Up.—Eighteen acres plowed, the products of which were \$530. Cost of labor and seed, \$129 leaving a net income of \$401, or about \$22.50 per acre. Wool raised, \$58.35, besides a large quantity of garden stuff, butter, eggs, poultry, etc., all of which find a ready and high market here, as we are in the midst of the coal mines and iron works. I have expended but little of my time on the place myself; two little boys have done most of the work except harvesting.

Let me say a word of encouragement to young men who have not farms and have nothing to buy with. I am a mechanic as well as farmer, and have earned, up to Nov. 15th and since April, \$407.24 with a paint-brush. Go and learn a trade first and that will get you a farm. — H. W. M. in Moore's Rural New-Yorker.

LIME AS A FERTILIZER.

At the meeting of the Elmira Farmer's Club, Nov. 23, in reply to an enquiry from the President as to what he should do with a quantity of air-slacked lime which he had on hand, Mr. Lewis Fitch said, as reported in the Elmira Advertiser:

"About thirteen years ago I had a piece of ground ten or twelve acres in extent, which had been so badly run that it would not produce any useful crop. It was too miserably poor to raise weeds, except sorrel, and with that it was completely covered. I plowed it well and planted potatoes, and, of course, got no crop. Not being acquainted with its poverty, I had hoped that diligent care would bring a moderate crop, but I was mistaken. The worthless sorrel was the only thing that would grow, and that monopolized the ground in spite of my efforts to raise potatoes. The next season I bought three hundred bushels of lime and spread it on about one-half the ground, throwing it on about the wagon with a shovel. That made a good thick dressing. My idea was that I should thus overcome the sorrel, for I thought lime was its antidote.

"I planted that portion again to potatoes, and was awarded with a very fine crop and a total extinction of sorrel, which has never appeared since. From that time to this, whenever the piece is plowed, traces of that lime application are seen.— It proved a complete renovation of the worn out land.

"Another remarkable instance of its good effect I witnessed many years ago on land near Hoffman's Grove, which was then in possession of the Mechanics Association, and my brother had a portion to sow to wheat. It was wet, cold and poor, so I felt impelled to say to him: 'you cannot raise wheat there.' He insisted on the trial, and as a preparation gave it a liberal dressing of lime. The result was a fine crop of wheat, which was manifestly due to that lime. When we used to run lumber down the river, I had opportunities of observing the uses to which lime was put in the vicinity of Little York, in Pennsylvania. That is a limestone region and almost every farmer had his private kiln in which he prepared lime for his own use. They drew it on so liberally that the heaps dumped from a bushel and a half

basket would lie not more than eight feet apart. I cannot say how much value it had, but it is certain that the region is agriculturally one of the richest in the State, and its excellence is supposed to be maintained, if not created, by the use of lime. I believe that more lime has been thrown on the ground in that locality than all that has ever been used in this city for all purposes."

D. E. Howell—"What is the soil?" Lewis Fitch—"Clay, black loam, red shale, and a mixture of these kinds. There is a very large extent of country with varying soils, where great dependence is placed on the use of lime, and the richness of all attests the wisdom of its use."

President Hoffman—"With the lime on your poor piece did you use any other manure?"

Lewis Fitch—"None at all in that year, and the following year I sowed it with oats and had an excellent crop, without any further application of lime or other fertilizers. On that crop it was stocked with grass, which made a good catch, and grew luxuriantly where grass would not grow before. At the subsequent plowings other manures were used, and the piece has always proved reliable for a good crop of whatever kind I have cared to raise."—Country Gentleman.

POTATOES AND OTHER SUPPLIES ABROAD.

On the potato crop in Yorkshire a correspondent of the *Gardener's Magazine*, writes:—"The potato crop in Yorkshire (if it may be called a crop) was all harvested in October. From inquiries made amongst farmers and gardeners, I have ascertained that the yield is about one load, where in ordinary seasons we should have had eight; about one sound tuber in eight; generally speaking, the sound tubers are very small and only fit for seed. Seed potatoes, good choice English varieties, will be dear in the spring. Foreign potatoes are just now very plentiful in almost every market town, the prices ranging from 9d. to 1s. per stone of 14 lbs. English varieties are now fencing in Yorkshire from 1s. to 1s. 4d. per stone of 14 lbs. If the foreign supply can be kept up to the market, it will have the effect of reducing the price of flour, and the laboring class will get bread cheaper. I have not yet tasted the Hamburg potatoes, but have heard that the quality of some is very good, and others only moderate. Very few English potatoes are good this year: there is great deficiency in mealiness. In my report about potatoes last year, I stated that those varieties which bloomed and carried plums, had the best constitution, and resisted the disease more effectually than those which did not carry fruit. It is scarcely possible to find a variety entirely free from disease this season, but I find by experience that varieties which carry fruit and bloom this year, have resisted the disease to a greater extent than weakly growing varieties. The red-skinned varieties have this year been best, and showed the least disease, whether kidneys or rounds."

THE EARLY ROSE POTATO IN ENGLAND.—LATE ROSE.

A correspondent of the *London Field* says, in that paper of the date of Dec. 2, "A correspondent asks for the experience of your readers as to the American Early Rose potato. I bought twenty pounds from Messrs. Carter, and they have produced about three hundred weight, which is an excellent result as far as quantity, but for quality let me advise all would-be purchasers to abstain. Mine are very watery, and I can only compare them in color and flavor to bad turnips. I tasted them when just ripened, and, in order to answer your correspondent, again yesterday, and the result in both trials is the same. I have heard there are two kinds of this potato; mine is long and very smooth skin."

There is an Early Rose potato and now we have a Late Rose—a sport of the former, not a seedling. A farmer in this

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State found when he was digging his Early Rose crop that a portion of the vines were growing vigorously. He allowed them to grow, saved the product, planted it separately and has continued to do so for several years. This potato resembles the Early Rose externally, and it is said can only be distinguished from it by a brighter red seed end. But it is three to four weeks later. During the years it has been cultivated it has preserved its distinctive characteristic as a late potato and as a better winter keeper than the Early Rose, Dr. Hexamer says it is more productive than the Early Rose and of much the same quality; while Mr. Quinn says it does not cook as well; for while the Early Rose cooks through evenly, the Late Rose cooks more like the Peach Blow—becoming white and floury externally while the centre is not cooked through. It is regarded as a very promising variety. It has not, however, been tested in other localities than that in which it originated, and its adaptation for general cultivation is not yet known. There are about 1,000 bushels on the market for next year's seeding, and they will probably be held for a higher price.

FERTILIZERS.

One of the most important facts which this extraordinary wet season has brought out, is, that fertilizers applied to soils in dry summers without appreciable effects are rendered available in those that are wet.

The plat upon which our fertilizers have been applied during the past years, when the rainfall has been so deficient, producing wonderfully this season. The fertilizing substances have been lying dormant in the soil for the want of water to render them soluble or to hold them in solution, and this year the conditions have been favorable for promoting the changes, chemical and mechanical, necessary for plant food to be made available. Owing to the dry weather the past three years, it has been difficult to conduct experiments with manures, and reach anything like reliable results. Hundreds of farmers have been misled, and have condemned as worthless manurial substances which had positive value, but which needed the usual meteorological agencies to render them assimilable. Farm dung and stable manures, as well as chemical fertilizers, have not exerted their full influence upon soils to which they have been applied, because of the absence of rain. This season they have been thoroughly subjected to the action of water, and crops have been benefitted by the dormant manurial agents applied two or three years ago. Manures are not lost which do not act promptly, unless they are blown away by winds, or are washed into brooks by sudden and violent showers, which sometimes fall upon the baked earth in summer. If they remain in or upon the soil, favorable seasons, which are sure to come, will force them to give up to plants the food they contain, and the husbandman receives his returns in abundant crops.—*Boston Journal of Chemistry.*

LEGUMINOUS PLANTS.

Leguminous crops, such as peas, beans, vetches, saintfoin, clover, etc., partake of the character of the pea, which may be accepted as the type of this family of plants. The prevailing mineral constituent of these plants is lime; for this reason they are sometimes called "lime plants." As we might for this reason expect, these plants flourish luxuriantly on lime soils, and are cultivated most successfully in limestone districts. For the same reason the addition of lime to soils containing but little of this substance greatly favors the growth of these crops. Another mineral constituent required by these plants is sulphur; hence, the addition of some combination of sulphur is generally attended with benefit to a crop of this description. A substance well fitted for this purpose is gypsum, or plaster of Paris. This compound, as already noticed, contains sulphuric acid and lime, and on this account may be regarded as a special manure for leguminous plants.

EXPERIMENT WITH POTATOES.

I also planted one-fourth of an acre with Peerless, with just one bushel of cut single eyes, two pieces in each hill; soil, light sandy loam, manured with a shovel-ful of yard manure to four hills. On half of the piece in alternate rows, a small tablespoonful of superphosphate was put in each hill. Before the last hoeing a handful of unleached wood ashes was put on the hills of the whole piece. The half on which phosphate was put, produced seventeen bushels and ten pounds of large, and five bushels and fifty pounds of small potatoes. The part where no phosphate was put, produced thirteen bushels and thirty-five pounds of large, and seven bushels and fifty-five pounds of small potatoes—a gain of three bushels and thirty-five pounds of large potatoes, in favor of the phosphate, and a gain of two bushels and five pounds of small potatoes, in favor of no phosphate. The value of the phosphate applied to one-eighth of an acre was fifty cents.

I have cultivated some twenty-five varieties of potatoes, and think the Peerless is the best of them all in quality, productiveness and freedom from disease. Several varieties planted close to the Peerless this year, rotted badly, while scarcely a tuber of the Peerless was affected.—*L. W. G., in Rural New Yorker.*

Horticultural.

GODERICH HORTICULTURAL SOCIETY.

At the annual meeting of the Goderich Horticultural Society held in the Grand Jury room of the Court House, the following report was read by the Secretary:—The Directors in presenting their annual report beg to congratulate the Society upon its continued prosperity. The Society held ten meetings during the year. We had fifty entries at our exhibition this year in excess of what we had on any previous occasion. The show of Flowers and Greenhouse Plants was large, and of excellent quality. There was keen competition between our professional and amateur gardeners in the Floral department, and the premiums taken were about equally divided amongst them. The show of fruit was also very good.

The quantity of apples exhibited was not so large as at some of our former Exhibitions, but there were some very beautiful specimens shown, which proves that this section of the country is second to none in the Province for fruit growing. The quantity of pears exhibited was smaller than at our previous Exhibition, but the trees bore heavily last year, which accounts for the deficiency this season, although there were some very good specimens shown. The show of plums, peaches, quinces, nectarines and grapes was very good indeed. The peaches were an excellent crop in this vicinity this season, they were sold as low as sixty cents per bushel in our market. The show of grapes grown under glass and in the open air was very large, and for some of the varieties there was keen competition. Goderich is getting a Provincial reputation for grape growing, one of our townsmen, an amateur gardener, having taken several premiums for his grapes at the Provincial Exhibition and also a prize for a sparkling wine made from grapes of his own raising.

The show of vegetables, notwithstanding the extreme drought of last summer and autumn, was very good. Some very excellent samples of the Early Rose and Peerless potatoes were exhibited.

The show of Ladies' work was larger and better than at any previous Exhibition, which we trust will continue to increase, as it adds very much to attract visitors to the Exhibition.

Peter Adamson, Treasurer, in account with the Goderich Horticultural Society, for the year ending December 31st, 1872. To Balance in hand..... \$ 25 84 " Subscription of 97 Members... 128 25 " Legislative grant from County

Society.....	57 10
" Municipal Grant.....	25 00
" Admission of non-members to Exhibition.....	23 10
	\$ 239 29
By Prizes for past year paid.....	\$ 161 00
" Exhibition building.....	8 42
" Agricultural Journals for members.....	4 25
" Working expenses.....	59 37
To balance in hand.....	6 25
	\$ 239 29

The following were the elected office-bearers for the forthcoming year:—Alex. Watson, President, J. H. Williams, Vice-President, Peter Adamson, Secy-Treas.; A. M. Ross, Harvey Howell, Thos. Hood Wm. Campbell, John Goodall, C. E. Humber, Wm. Harrison, E. Bingham, and Robt. Gibbons, Directors; Messrs. Thompson and Henry Horton, Auditors.

GERMAN HOT-BEDS.

We feel that, in complying with the request of our friend, 'C.', to give him 'some account of translucent cloth hot beds,' to be employed instead of the expensive glass frames in general use, we are also doing all our gardening readers a service. We can vouch for the value of the 'German Hot-Beds,' having tried them very successfully, many years ago.

For forcing early melons, tomatoes, etc., this prepared cloth is especially adapted, as it can be tacked to boxes of any size required, and cut to fit them. Little, rough, square boxes of the proper size and height, covered with the prepared cloth, can be placed over the hills in which tomato, melon or other seeds are planted, and the plants allowed to stand without transplanting, until all danger of frost is over. When the boxes may be taken off and packed away carefully for another season.

Take white cotton cloth, of a close texture, stretch it and nail it on frames of any size you wish; mix two ounces of lime-water, four ounces of linseed oil, one ounce white of eggs separately, two ounces of yolk of eggs; mix the lime and oil with a very gentle heat, beat the eggs separately, and mix with the former. Spread this mixture, with a paint brush, over the cloth, allowing each coat to dry before applying another, until they become water-proof. The following are some of the advantages these shades possess over glass:—

1. The cost being hardly one-fourth.
2. Repairs are easily and cheaply made.
3. They are light; they do not require watering; no matter how intense the heat of the sun, the plants are never struck down, or faded, or checked in growth; neither do they grow up long, sickly, and weakly, as they do under glass, and still there is abundance of light.
4. The heat entirely arising from below, is equable and temperate, which is a great object. The vapor arising from the manure and earth is condensed by the cool air passing over the surface of the shade, and hangs in drops upon the inside, and therefore the plants do not require so frequent watering. If the frames or stretchers are made large, they should be intersected with cross-bars about a foot square, to support the cloth. These articles are just the thing for bringing forward flower-seeds in season for transplanting.—*Our Home Journal.*

USE OF EVERGREENS.

The *Western Agriculturist* says:—No suburban or country residence can be considered complete without its surroundings of beautiful trees. Evergreens should be extensively employed because they add greatly to the beauty of the surrounding scenery in the most gloomy season of the year; but they should never be employed to the exclusion of deciduous trees and shrubs. Extensive walks and drives are sometimes bordered with evergreen trees; but usually this displays bad taste, inasmuch as the view within such close lines of dense foliage becomes monotonous and the eye experiences satiety instead of a pleasing variety. With deciduous trees and shrubs the most charming change is continually going on; from the bursting of the buds in spring there is one continual progressive advance from day to day.

INSECTS WHICH DESTROY THE FRUIT.

The Cutworm is a very injurious insect to peach trees, grapevines, vegetables, grain, &c. They cut off about two-thirds of our crop of grapes this season by cutting off the young shoots.

The Codling Moth is a small miller that stings the apples, pears and quinces. It lays the egg in the blows. This hatches into a grub which eats a hole in the apple when maturated, crawls out and forms itself into a chrysalis under the scaly bark on the tree, which transforms into a miller and is ready for work. It is a good plan to put a piece of old cloth or rope in the tree; then you can easily destroy the worms, because they will hide under it.

The tent-caterpillar, which forms the large cobweb-like nests in orchards, in some localities are very destructive. The eggs are laid on the twigs in bunches numbering from two to three hundred. The best method of destroying them is to tear down the nests wherever you find them. This can be done by scraping off the nest with a stick and destroying all the caterpillars.

The Canker Worms of the Northeastern States have made their appearance in Michigan. I think it a good plan for all fruit growers to look out for them.

The Bark Louse, having oblong, flatish, brown scales, with white eggs under them, can easily be destroyed by thoroughly syringing them with strong tobacco water and soap suds.

The Pear Slug is a brownish green slimy slug, which feeds on the leaves of the pear and cherry trees. I think the most practical and easy plan of destroying the slug is to throw dry ashes or road dust on the tree while the leaves are wet.

The peach tree borers are large white worms, which work just below the surface of the ground. I do not know of any way of destroying them only to take a hoe and dig away the dirt around the tree, then take an old knife and dig them out. We have tried different ways, but nothing has proved any better.

The Horse.

IS STRINGHALT HEREDITARY?

The *North British Agriculturist*, in answer to a question asking if stringhalt is hereditary, states the case thus:

The precise conditions on which stringhalt consists are yet unknown. Frequently it is traceable to tumors about the brain; sometimes spiculae of bone have, after death, been found pressing upon the great nerve going down the hinder extremity. Probably any causes which interfere with the nutrition of the brain, spinal cord, or even of the large nerves, may induce the peculiar catching movement characteristically entitled stringhalt. In many cases it resembles chorea, or St. Vitus's dance. It may, indeed, be fittingly regarded as chorea affecting the extremities.

Although more common in the hind limbs, it occasionally affects one or both fore legs.—The nervous way some horses carry their heads, the trembling muscular twitching and other fantastic movements of the head which are often excited while the horse is being put on, appear to be manifestations of conditions very similar to stringhalt. All these defects are usually particularly apparent when the animal is first brought out of the stable, and when from any cause he is irritated or annoyed.

The slightest cases of stringhalt are readily enough made apparent by causing the animal to move backward, or to take a sharp turn, when for a few steps the natural symmetry of motion is disturbed, and the sudden catching up of the affected limb is particularly noticeable. The great majority of cases of stringhalt appear to be brought on by causes over which we have as yet but little control. Although often born with the colt, or observable very soon after birth, it usually appears to be independent of hereditary transmission. In a few cases in which we have known it to reappear in the progeny of stringhalt parents, it has followed the sire rather than the dam. No treatment, either of pregnant mare or of her foal, can prevent its occurring. Violent exertion, undue excitement, unwonted sights and sounds, as in other animals, tell very prejudicially on the foetus in pregnant mares, and may become a source of stringhalt. Chorea and other nervous disorders in children, are often traceable to frights and violent nervous impressions sustained by the female while the child is *in utero*. In well-established cases of stringhalt, neither iron, arsenic, strychnia nor electricity are of any permanent value as a cure.

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POTATO IN ENGLAND.

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WINTER MADE BUTTER.

Why is it that the June and October make of butter is best? It is because it comes nearer hitting all the points necessary to make the best butter. The temperature then is right, the air pure, the grasses sweet and tender, and cattle are not oppressed by heat. The water, also, is better then. All this has reference more to June than October, hence June butter is the best butter made during the season.

Butter is one of the most delicate things in the world. This, however, is not generally believed. It is not denied that butter will take on odors, but the extent that it does this is not appreciated—hence a little carelessness is thought to do no harm. So if the vessels are not perfectly clean, they are made to pass. The odor of the stable is thought not to hurt, if only the filth itself can be kept out of the pail. Then who fears any harm from the soft warm air of a room? And if the temperature gets up into the eighties for a short time, no harm is apprehended.

But all these kill butter. One of them alone is sufficient to spoil the taste. To let the cream form in a room inhabited in winter is to subject it to all the odors of the room, whether plainly extinguishable or obscure. These are constantly being gathered about their presence becomes plainly perceptible to the taste. Hence the onion and the smoke flavor, and often the flat, sickish taste caused by the foul condition of the air which is repeatedly breathed over. And if the heat is for some length of time at eighty degrees, rancidity inevitably follows.

These are facts, and why not heed them?—They are the great cause of our proverbially bad winter butter. People have their butter laid down in October for winter. This is not necessary. Butter about equally good can be made from early cut, well cured hay, with some other food if necessary. But the stables must be kept clean, and littered with some absorbent and ventilated. There must be clean vessels throughout—scrupulously clean—and, the most of all, the room must have pure air, and the temperature must not go much above fifty degrees, and should not drop much below it.

Milk has no business to be set in a room that is inhabited in winter in our climate. A separate room should be given to it where there is sufficient milk to warrant the expense. Ventilate this room, and warm it with a coal stove (self-feeder or base-burner) to secure an even temperature, not only during the day, but the night also. Then there is no difficulty to make as good butter as is done during the summer.

Where there is little milk, there is difficulty to treat it successfully. It will not pay to warm a room separately for it, so we have to make the best of the circumstances. Keep the room well aired, as all rooms ought to be. Use a coal stove, which will prevent smoke—a great gain. If the cooking can be done in another room, so much the better. But in no case have the milk near the stove, which is apt, at least at times, to become overheated, or sufficiently to raise the temperature readily to 80 deg. and over. Keep away from the stove, so as to avoid this excess of temperature.

In all rooms where milk is kept in winter for cream, there should be a sufficient and constant supply of fresh air, so as to keep up enough moisture that the cream does not dry on the surface, producing flakes in the butter-milk and butter, and giving a white appearance to them. A dish supplied with water and kept on the stove is an advantage. By taking a little pains we may as well have good winter-made butter as to have the objectionable article so common.—F. G., in *Country Gentleman*.

CHOKED CATTLE.

To relieve a choked ox or cow, give at once one half pint melted hog's lard, and exercise the animal. It sickens the stomach, and the obstruction will pass immediately either up or down, as the animal will cough and swallow at once, and thus get relief. Put the warm lard in a junk bottle and raise the animal's head—it will run down easy. This is the surest and safest remedy known, and never fails if administered soon after the accident occurs.—*Country Gentleman*.

COOKING FOOD FOR STOCK.

At a meeting of a Farmers' Club there was read an article on this subject—a very important one to the feeders of stock. It was in the form of queries and replies by one who is said to be one of the best farmers in the country. He gives the result of his own experience, and we give it from *Moore's Rural New Yorker*, condensed for the benefit of our readers:—

W. Crozier feeds ninety cows and other cattle. He feeds horses cooked food entirely—feeds no clear grain; cooks all in winter. To cows he feeds about three per cent of the gross weight of the animal of his mixed food, all steamed. Feeds twice a day. Sometimes feeds a little raw hay for change. Feeds straw mixed with hay or corn fodder. Considers a ton of good oat straw worth one-third of a ton of hay for feeding cows, both being steamed. Wheat and barley straw only good for bedding, unless cut before the grain is ripe, and the grain must be lost to get the value of the straw. Sound corn is as good as hay if cut at the proper time. Corn stalks are not so good. He would not feed to horses cooked food through spring ploughing and other hard work; would feed hard food—hay and oats.

Stems fodder with two pounds pressure and for three hours time. Feeds mangold wurtzel and other roots, cut, mixed with the other food and steamed. Cooks fodder every day, and feeds blood warm, not warmer. Cuts fodder an inch or an inch and a half. He would further advise to manure well and plough deep, according to the old proverb.

The following remarks are added:—The roots, hay and corn fodder are cut, then mixed together, then dampened and kept warm on top of the steam-box; then dumped into it, mixed with bran and salt and steamed. Mr. C. has fifty horses, and not one of them has had the influenza. It is not said that this feeding has prevented it, but it is said that this fact proves that animals fed on cooked food are not so liable to disease. Steaming food is of value in the straws of grain like wheat, rye and barley, merely to soften their flinty nature; in corn stalks and roots it changes the roots into grape sugar or diastase, which is soluble and readily digestible in the stomach. Hence it renders such foods more nourishing and warming. There is, it is conceived, a difference between the method of steaming and that of cooking in water.

HOW I SUCCEEDED WITH HOGS.

With your permission, I will say a few words to the readers of *The Journal* about the hog, and how he grows under my care. Two years ago I purchased a piggy sow, said to be half Chester, and to the 4th day of May last had raised from her and her descendants, 141 pigs. The first litter, which came soon after her purchase, were by a fine Chester White boar. Six of them were sows, and three I bred to a Chester White boar, and three to a Berkshire, the entire six having pigs when about nine months old, four of them raising a second litter when about thirteen months old.

I selected 21 sow pigs, that came in May and June, eleven of them 3-4 Chester White, and ten 1-2 Berkshire, breeding the former to a Chester White boar, and the latter to a Berkshire, and from each raised pigs at a year old. And last May I selected 24 of the choicest pigs at a month old, one half of each breed, and put them in a pen together, where I have kept them ever since, feeding raw potatoes with a little slop (starvation diet). They are now between five and six months old, and the Berkshires will average about 60 lbs., and the Chesters 50 lbs.—W. F. K., in *Stock Journal*.

CHURNING.

Willard says, in his "Dairy Husbandry" during the process of churning, a certain uniformity of temperature must be observed, or the butter will be soft and spongy, instead of being firm and compact. The agitation, also, of the cream should be regular—neither too quick nor too slow. If the agitation is too quick, the butter will make and unmake itself before the churner is aware of it, as too rapid motion induces fermentation, which, when it reaches a certain point, is entirely destructive of anything like the possibility of making even moderately good or well tasting butter.—If, on the other hand, the motion be too slow, the agitators in the churn fail to produce the desired separation of the component parts of the cream, and the consequence is, that after a good deal of time spent in lazy action, the churner is just as far from his butter as he was at the beginning of his labors. The best temperature for the cream in churning, is from fifty to sixty degrees.

SHALL FARMERS FEED COWS FOR MILK IN WINTER?

We suppose that it is pretty well established as a rule, that a cow cannot do her best at secreting milk, and laying on flesh, at one and the same time. That the amount of nutrition diverted for the formation of the lactical fluid is subtracted from the flesh, fat and bones.

Another principle we consider established quite conclusively to the mind of every farmer, of long experience, is that a cow kept in milk through the winter will not yield so much through the butter and cheese making season, as if she was dry for three months, during the most inclement portion of the year. If these propositions are true, it is not profitable for the farmer who does not sell milk, to milk any more cows through the winter than may be necessary to supply his family with milk. He can not make cheese; neither can he make butter to any advantage; why then, should he exhaust his cows by drawing from them that nutrition so necessary to the recuperation of their systems, exhausted by the drainage of the pasturage season?

With milk as our leading object in winter we should give cows very different feed from what we should if our object was simply to carry them through in good condition. The coarser portions of wheat—mill-feed and middlings—have a tendency to promote secretions of milk; so have brewer's grains, distiller's slops, and certain various varieties of roots and vegetables. These, unless we except fine middlings, are not calculated especially for building up and strengthening the animal. On the other hand, corn meal does not promote the flow of milk, but can hardly be surpassed by any of the products of the farm, in its flesh and fat forming properties.

Again, some kinds of roots and vegetables, as mangel wurtzel, white turnips, potatoes, increase the flow of milk, but afford but little flesh. Carrots, ruta-bagas and cabbage, have more flesh-forming properties, but a so increase the milk. For most cows cabbage is very good both for flesh and milk, but some show a tendency to retain a strong flavor of the vegetable in their milk, and even in their flesh, so that if fattened upon them their beef would be so flavored as to be rendered objectionable. We never met with but one or two that were unfavorably affected by cabbage, and even with such there could be no objection to feeding them cabbage when we were neither making milk nor beef from them, and we know of nothing in the vegetable line that can be raised with less cost, and yet afford so much nutriment. But to feed stock in winter with any kind of food that can be injured by freezing, a frost-proof cellar is an imperative necessity.

In view of all these considerations we are prepared to answer the question at the head of this article in the negative.

We do not consider it advisable for those who do not produce milk to sell, to feed their cows with such feed as shall form milk at the expense of muscle, nerve, and bone, in the winter season.—*Rural Home*.

TO MAKE THE FATTENING OF CATTLE PROFITABLE.

The great trouble is that we do not get money enough for our meat. The consumers in our cities have to pay enough for it, but the money does not seem to find its way into the farmers' pockets. If I want a beefsteak, the butcher will charge me eighteen cents a pound for it, and it is not unfrequently very poor stuff at that. If I want to sell a carcass of beef, I should probably get no more than seven cents a pound.

I do not say that the butchers make exorbitant profits. One would think there is competition enough to prevent this. I suppose one trouble is that our beef is not a good as it should be. There is too much bone, tallow, and inferior parts of the carcass in proportion to the choice cuts. We want better bred animals.

One of my neighbors has some thrifty two-year old steers. "I am overstocked," said he, "and want to sell them, and all that those rascally butchers will offer me is \$35 per head." I presume they offer him about what they are worth to kill. But why kill them? To make them into really good beef they want twelve months of good feeding. Many farmers in this section seem to have come to the conclusion that it does not pay to feed cattle, and are selling off everything that the butchers will take. The consequence is that the meat market is flooded with inferior beef that must be sold at a low price—and is dear at that. It seems to me that those who have good young animals should hold on to them, and give them good feed. But ill-bred, inferior animals may as well be sold as not. It is impossible to fatten them in winter or keep them over to good advantage.—*American Agriculturist*.

QUALITY OF PORK INFLUENCED BY FOOD.

In a recent issue of the *Live Stock Journal* we took occasion to offer some observations upon this subject, and meeting with the following from the New England Farmer, we lay it, also, before our readers:

A few weeks ago, we had occasion to say something in favor of the use of good pork. This was done for two reasons; first, because we do not believe that the moderate use of good pork is unwholesome, and secondly, because pork, in one form or another, is an article of prime importance—we had almost said indispensable—in the family of the farmer.

All this was said of good pork—the flesh and fat of animals which were healthy through life, having been properly fed on nutritious but not too highly stimulating food, and fattened—not to obesity—and then slaughtered in a cleanly manner and preserved with care. Banish these productions from the farm, and the means of furnishing some of the most acceptable, nutritious and wholesome dishes will be gone. The barrel of salted pork, and vegetables from the garden, furnish the principal supplies of the dinner table through most of the summer months to the thousands upon thousands of New England families. Take them away and thousands of housewives would be sorely puzzled to furnish an inviting feast to those daily awaiting their welcome call.

But there is nothing yet discovered that can fill the place in the cuisine department of good, sweet pork, fresh or salted, or in bacon or in snowy lard. Butter will not do, even if it were good butter; and that would be an anomaly. There are some dishes that must be seasoned with pork; in this case will supply its place. It gives a savoring and finish to viands which is natural to them as butter is to the bread or cream to the coffee.

But the flesh of the pig may be injured, no doubt, by injudicious feeding, or exposure or bad treatment. The flesh of swine that run in the woods, and feed upon roots, insects which they find, acorns and other nuts, is strong and unpalatable. If fed largely on flesh, brewer's grains, and other stimulating food, the flesh may not be so solid and so pure as if fed upon dry grains, meal, vegetables, and young sweet grass. The flesh of a slaughtered ox will give the taint of an onion which he ate several hours before; so will the flesh of poultry be tainted by having access to filthy sewers and vaults.

Let all who raise pork, then, give the living animals clean and warm or cool places, to which they can resort at will, so as to preserve in themselves an even, agreeable, and healthful temperature at all times. Let their meals be regular, always sufficient to appease the craving of hunger and to promote a fair growth. Let them have the light and the warm rays of the sun directly upon them when they desire it, if possible. Give them cool water and fresh vegetables frequently, and, during the summer season, as much short, sweet young grass as they will eat. What is of the first importance, also, is a clean, warm bed in hot weather, so that they can be undisturbed by flies.

But all this costs something. Certainly, so does rearing a colt, heifer or steer; yet it is found profitable to give them careful attention day by day, and many times in a day. Is it any less so to rear the pig properly, that is, to supply the family with so much healthful food, and that which is so delicate and essential, too? It certainly is not.

GRASS AND PORK.

Feed more grass! These three words contain and explain the entire theory of that practice by which any one can make hog raising—barring the cholera—as profitable as the raising of any other kind of stock, if not more so, on account of their ready sale in any market every year. When I say feed more grass, I do not mean to advise you to turn your sows and pigs, shoats and stock hogs upon a short crop of any kind of grass, or upon an old field in which the noxious weeds and briars luxuriate, or from which the cream of the best and richest herbage has been cropped by your bunch of mules, cattle or horses, and then expect your hogs to flourish, grow and fatten for the market, without feeding corn at all. By no means; for hogs kept on such pasture must have corn, and that in ample quantities every day, if you would realize anything from their growth.

A small but excellent hog raiser followed these rules: He fed about sixty-five head.—He had about thirty-five acres in clover and rye; while the clover was growing rapidly, he turned in the smaller ones, and when it blossomed he turned them all in until the rye was ripe enough, then turned all on rye to eat it down, and in this way the clover and the rye receded the fields for years. Before the clover came, there was always a good blue grass pasture. The first of October they were put up and finished on corn. On this plan his hogs were always healthy and his pork cheaply made.—*Farm and Fireside Journal*.

FARMER'S ADVOCATE

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DIFFERENT BREEDS OF SHEEP.

To the Editor of the Live Stock Journal:

I should like to see, in the Journal, a full and fair description of the Cotswold, Leicester, and Lincoln sheep so as to distinguish one from another. Sheep are being brought to my part of the country under the names, always, or course, of the most popular breeds of long wool and mutton sheep.

The Leicesters are usually placed at the head of the long wool breeds as being the finest in form and fleece, and also because it has been largely used in crossing, for the improvement of the other varieties.

The head is hornless, and rather long and narrow; ears thin, with spots of bluish tinge. The long, well cut ear of the pure Leicester, with its slightly backward inclination, is a distinguishing characteristic of the breed, as is also the full prominent eye, with quiet and lively expression. The face and forehead must be bare of wool, though covered with a fine coat of hair—white, with a little inclination to the bluish tint.

The body is straight, with ribs well sprung and barrel-shaped; the pelt inclined to be thin; the wool exceedingly soft, fine and lustrous, and should be uniform over the whole of the carcass.

The extremities—muzzle and legs—are exceedingly fine, but the quarters are full and wide, with back broad and level. Indeed, the carcass of the true Leicester sheep is as near perfection in form as can be conceived possible.

The Cotswold, though of late years modified by crosses of the Leicester blood, and, therefore, strongly resembling that breed, is somewhat coarser and longer in carcass; with a heavier fleece, which should be as lustrous, though not so fine as the Leicester. The head is larger, and must have a tuft of wool on the forehead, which the Leicester variety never has.

The Lincoln is as large as the Cotswold, though in other respects, as now bred, very strongly resembling the Leicester. The head is long, the face narrow and bare of wool, with white fine hair and light bluish tint as in the Leicester. They stand rather higher on the leg than the two varieties before mentioned, and the carcass is apt to be less symmetrical; but the fleece is long-r and heavier, and though not quite so fine as the Leicester, is unsurpassed in lustre, and, therefore, commands the best prices in the markets.

It is difficult to describe animals so as to enable a person to determine the pure-bred from the mongrel; indeed, the best judges are not always able to detect the presence of a slight dash of inferior blood.

One thing the producer may rely upon—that long-wool sheep peddled about the country at low prices are never pure-bred. Indeed, blooded stock of all sorts should be purchased of parties that are known as reputable breeders—this is the only reliable security the purchaser can have that the animal purchased will turn out what it is represented to be.

The Southdown sheep has a broad, rather short though extremely neat, head; forehead covered with wool, and the face and legs with grey or brown hair. The fleece is rather short, of good felting quality, equal to half-blood Merino, but superior for flannel, &c., and should be solid and compact, and of uniform quality throughout without any projecting hairs.

The carcass should be straight, with well-sprung ribs and broad, level back, having wide quarters, deep flank, and well-packed twist. This being held in higher esteem than any other breed for the production of superior mutton, the full and perfect development of carcass is deemed of the highest importance.

The Hampshire Downs are coarser in form and fleece, with black faces and legs. The Shropshire Downs are a cross between the Southdowns and long-wools—a large breed with long, coarse wool, in form resembling the Cotswolds, with black faces and legs.

In regard to this matter of the color of the faces and legs, it is remarkable that while the Southdowns, which stand at the head of all these varieties, have, as before observed, brown or grey colors in these parts—their crosses on other breeds will frequently show black faces and legs.

When the object is to keep a small flock for mutton, rams of this variety are found exceedingly profitable to cross on ewes of a most any other breed. But the nearer they go to the pure blood, the better the mutton.

CARE OF SHEEP.

If possible, make arrangements to keep all the sheep under shelter the present winter.—And in the construction of sheds keep away from low, wet ground. If left to choose for themselves, they seek that which is high and dry.

CHARACTERISTICS OF A GOOD MILKER.

We find in an exchange the following rules given as a guide in purchasing dairy stock:—

1. Youth. A cow is in her prime when from four to six years old, and the best paying time to buy is just after the birth of her second or third calf.

2. Prominence and fullness of milk veins, and velvety softness of skin. The milk veins run down on either side of the animal towards the udder, and are easily perceptible to the eye, or can readily be found by pressure of the hand, if the animal is not over fat. The skin should be soft and mellow, not hard, rough and "staring."

3. Symmetry, fullness and softness of the udder. It should be broad, well spread out, projecting behind the legs, and also reaching forward under the belly. There should be a softness to the touch, and an absence of fleshiness and thickness.

4. Perfect number and condition of teats. If one teat is wanting, about a fourth less milk will be the result. A cow's udder is not, as some suppose, a barrel with four taps, but it is divided into four different compartments, called "milk glands," each of which has its own tap or teat. It is not only important that the full number of teats be present and in working order, but it is desirable that they will be well placed, not crowded together, but pretty far and uniformly apart; but rather long and tapering; all pointing out and downwards; equal in size and even in appearance.

5. Docility and quietness of disposition. These are indicated by large, mild and clear eyes, and an air of contentment generally. A cow that is quiet and contented feeds at ease, chews her cud with entire satisfaction, and will secrete and yield more milk than any restless and turbulent animal, having similar characteristics in other respects.

FROM CONTINENTAL CORRESPONDENCE OF PRAIRIE FARMER.

We have at last a clean bill of health respecting the plague. One case of suspected typhus was notified to the authorities, the animal was slaughtered, but the post mortem examination revealed no signs of the scourge. Far otherwise is the condition of the foot-and-mouth disease. It rages not only extensively but with intense gravity. That it is contagious is now admitted, and much regret is expressed that in point of vigorous inspection and summarily circumscribing it, all was forgotten. The milk, too, of affected stock is no longer considered safe, even when boiled. Carbolic acid given as a drink or used as an injection, in small doses cautiously diluted, is highly spoken of both as a remedy and a preventive. Vaccination has been tried but unsuccessfully. A drink composed of cooked barley, following a slight dose of Glaube's salts, produced good effects. It has been observed that a sure symptom of the disease is when the milk, left to set, throws up but little cream.

TRANSACTIONS IN LINCOLNS.

Richard Gibson, Esq., writes to the *National Live Stock Journal*, that he has purchased all of J. C. Snell's imported Lincoln. Also, that he has sold four imported shearing ewes, to Mr. Thomson, London, Ontario; an imported ram to Mr. Wright, of Windsor, Ont.; a ram to F. Sales; and 23 high grade ewes (on Leicester foundation), to Col. King, of Minneapolis, Minn.

John Snell & Sons, "Willow Lodge," Edmonton, Canada, have recently made the following sales:—To S. Truman, Mitchell, Iowa, one Cotswold ram lamb; to J. Tompkin, Spencer, N. Y., one Cotswold ram lamb and one ewe lamb; to R. Kenny, Ottawa, one Cotswold ram lamb, one Leicester ram lamb, and six Leicester ewes; to H. Jeffrey, Whitley, Ont., 10 Leicester ewes; to J. Rowart, Barrie, Ont., one Cotswold ram lamb; to P. Cameron, Perth, Ont., four Leicester lambs.

THE NECESSITY FOR IMPROVEMENT.

A correspondent of the *Rural Home*, in discussing the sheep question, declares that it is no longer profitable to keep flocks of Merinos in the older States which will only shear an average of 4 lbs. of wool. He mentions the names of Geo. Ashley, of Hemlock Lake, N. Y., and also those of Messrs. S. P. Reed, R. C. Beach and H. D. Adams (same place we presume), which have been carefully bred, and average from 7½ to 8 lbs. of washed wool; "and the day is far distant," he thinks, when such flocks "will not pay in Western New York." Keeping the best, and studying hard for improvement in all directions, is the price of success.

PURCHASE OF COTSWOLDS.

Messrs. Snell have purchased the entire flock of Cotswolds of A. & J. Jeffrey, Whitley, Ont., bred from the stock of F. W. Stone, of Guelph.

COTSWOLD SALES.

John R. Craig, Esq., Edmonton, Ont., reports sales of a Cotswold ram each, to Mr. Moffat, of Ohio; B. F. Doran, Buncetown, Mo.; Robert Kerr, Mexico, Mo.; H. Wellens, Blackwell, Mo.; J. W. F. Belt, Bethalto, Mo., Mr. Duffy, St. Louis, Mo.; B. L. Dorsey, Dorsey Station, Ill. Four rams to Wm. Gill, Bunker Hill, Mo.; five rams to A. S. Ferguson, St. Louis, Mo.; one ewe to E. M. Chrisman, Jacksonville, Ill.; four ewes to Messrs. Miller & Powell, Beecher, Ill.; and four ewes to Capt. Bastle, St. Louis, Mo. Also a prize pen of five, embracing selections from the winners at the English Royal of 1871, and the Canada and American fairs of 1872 (being the pen to which was awarded the sweepstakes for any age or breed at St. Louis, 1872), for \$1,000.

Poultry Yard.

HENNERIES NECESSARY.

The *Germantown Telegraph* says:—Those not fully familiar with all the requirements of the "henery," should remember that if they desire a liberal crop of eggs in the winter, fowls must be fed with raw meat chopped fine, not less than twice a week. They should have a constant supply of gravel, also old mortar, lime or ground bones. They should be kept warm—the house should have a southern exposure, if possible, with window lights to shift when necessary. No one who cares about the appearance of his lawns, or the cleanliness of his yards, doersteps, etc., should allow his fowls to wander about. A chicken yard as well as a chicken house, is indispensable. As a dessert, a feed of crushed bones or bone dust should not be overlooked. On it mainly depends the success of the henery in winter.

DISEASES OF POULTRY.

Nearly all poultry diseases are caused either by wet, want of cleanliness, or bad feeding; in other words by neglect somewhere. It is easier to guard against this than to cure birds when they are ill, which is almost always a very unsatisfactory speculation. The chief obstacle is that being covered with few feathers, there are few symptoms to observe; and as the poor dumb things cannot tell what is the matter with them, we often have to prescribe very much in the dark. We see, for instance, a fowl evidently ill, with feathers ruffled, comb dark and dull, appetite nearly gone, and listless and dull in manner; but this may be the result of many different causes, and more special symptoms are hard to discover, seeing we can hardly feel its pulse, and its skin is difficult to examine. Common fowls hardly pay the trouble they give in treatment; but with valuable birds the case is different, and it is chiefly on their account we give what is yet known, so far as we are able to discover, of poultry disease.

There can be no doubt whatever that a certain percentage of death amongst fowls is an actual benefit. Fowls, like everything else, must die some time; and, again like everything else, it can but seldom happen that the cause of death will be mere old age. A certain proportion of loss, therefore, is not necessarily a proof of mismanagement, but is rather part of economy of the great superintendent of the universe, by which creatures no longer really capable of maintaining the vigor of the species are taken from a world in which they are of no further use. As is well put by a writer in one of the American poultry journals, "the mere eye of Nature has picked out the very ones that you would be glad to get rid of could you detect them, and has left to you the hardier individuals to breed from; the weakness, moreover, often consisting in some profound fault that does not show itself."

It is cases of this nature, in which some extra trial of weather or circumstances has only developed latent weakness, issuing or not, as the case may be, in any well-marked complaint, which are difficult or even impossible of cure. There are, however, many cases in which exposure or other active cause has occasioned acute disease in the most healthy birds presenting plainly-marked symptoms, the treatment of which is well understood. Such are the mostly amenable to judicious treatment, and fowls of priceless value may thus be saved, which otherwise must be lost to the amateur. Between the small group of such plainly marked diseases—as roup—and the many instances in which to all present knowledge the symptoms are totally obscure, and recovery must be left to the natural powers of the bird, aided by such nursing and regimen as appears best, is a large class of cases in which partial ground for guidance is afforded by some one or more symptoms of a marked character. In these also treatment may be adopted with hope if the affection be of a sudden or acute character; but chronic symptoms usually betray constitutional weakness, and are not only difficult to deal with, but even in the interest of the yard it is often better to let them run their natural course, or to anticipate their effect by merciful execution. —*Wright's Illustrated Book of Poultry.*

PURCHASING UNDRAWN POULTRY.

We are one of a score of housekeepers who totally object to the purchasing of poultry unless it be drawn. The habit of forcing fowls on the market undrawn, and allowing them to freeze and thaw (generally with full crops), by which process they become fetid and turn green, can not prove otherwise than unwholesome food—not fit to be eaten. No fowls should be purchased by housekeepers unless they are properly cleaned and drawn. In many cities there is a fine imposed upon the person who offers undrawn poultry upon the market for sale.

PURCHASING POULTRY FOR THE TABLE.

As we have given the mode for fattening fowls for market, &c., we now have a word of caution to offer those purchasing poultry which may not, perhaps, come amiss. Those who are not good judges of poultry, as to their age, may, and often do, have old, tough fowls palmed off upon them by an unscrupulous dealer.

Fowls are killed and prepared for market with much adroitness and care by some dealers, and many devices practiced to catch the eye of the unsophisticated purchaser—the best side of the poultry being shown to the greatest advantage. Every sort of fowl is killed, plucked and put on the market, and if the purchaser buys an inferior article at an exorbitant price, he has only himself to blame for so doing.

HOW TO JUDGE THE AGE OF POULTRY.

The age of a plucked fowl can be judged simply by the legs. If the scales on the leg of a hen are rough and the spur hard, it will not be necessary to see the head to determine that she is old; still the head will corroborate your observation; if that of an old hen, the bill will be stiff and hard, the comb rough and thick. The scales on the leg of a young hen are smooth, glossy and fresh colored, whatever the color may be; only the rudiments of spurs are observable; the claws tender and short, the under bill soft, the comb thin and smooth. An old hen turkey has rough scales on the legs, callousities on the soles or bottom of the feet, and long, strong claws; while a young turkey has the reverse of these marks. A young goose or duck can be readily told by the tenderness of the skin under the wings, the strength of the joints of the legs, and the coarseness of the skin.

If the foregoing directions are strictly followed, in purchasing poultry, we will venture the assertion that the "good housewife" will have no fault to find with the length of time it takes to cook, or the toughness of her holiday turkey, goose or chicken. This mode of finding out the age of fowls is infallible.

HEALTHY FOOD FOR CHICKENS.

I have noticed lately, in many of the Eastern and Western papers devoted to the interest of farmers, a great complaint in regard to "Chicken Disease," almost equal to the "Ept-zootic" among the horses. Now I find no such reason to complain of mine, and I have as fine stock as there is in the county, full-bloods of different kinds. Having had considerable experience in the "chicken business," I will tell you thousands of readers how I feed mine from Nov. 1st to Feb. 31st.

For one hundred hens I take every morning one dozen medium sized potatoes boiled and mashed, together with five quarts of bran, one quart of good wheat middlings, and one teaspoonful of Cayenne pepper; mix the whole with hot water. This dish they relish, keep perfectly healthy and produce an abundance of eggs. I, of course, give them fresh water every day, and get at the butcher's every Wednesday morning three lbs. of what we, in the West, call "cracknels," or the refuse of renderings of lard. The cost of this latter is very cheap—three cents per lb.—and the chicks devour it with as much zest as you and I do our mince pies.

When there is snow on the ground I keep them in the hen house, which is always kept clean and dry, one built expressly for them, 28 by 40, with every convenience for their comfort. Of course to have nice, healthy and fat chickens, and plenty of fresh eggs, requires care; but I do this, in the morning while breakfast is being prepared, and don't seem to miss the time; and when we desire a nice, fat, plump hen for dinner or eggs for breakfast, we always have them on hand. Our Brahmas, when roasted, are about equal to a turkey.—C. S. S. Tomp, Plymouth, Ind., in "Moore's Rural New-Yorker."

A Louisville man who had only been acquainted with his girl two nights, attempted to kiss her at the gate. In his dying deposition he told the doctors that just as he "kissed her the earth slid out from under his feet, and his soul went out of his mouth, while his head touched the stars." Later dispatches show that what ailed him was "the old man's boot."

Good Health.

OVERWORK AND WANT OF SLEEP.

Overwork causes a great deal of ill health in farming communities. Very many farmers, in their efforts to avoid idleness, which they consider a sin and a shame, go to the other extreme, and lose both health and happiness thereby. While industry tends to health, overwork breaks down the constitution and shortens life. It injures both the body and the mind, and if long continued, results either in death or in premature old age. For this sin, and sin it is to overwork, there is not nearly the excuse on the part of farmers which there was twenty years ago.

Now one has machines to take, in a great degree, the place of hand labor, and the farmer who will use them need not break down his health by working too hard.

But it is not the farmer who is most liable to overwork. The farmer's wife is generally the greater sufferer. Every day in the year, Sundays not excepted, she has much to do. Often there is as much required of her as two women ought to perform. As the result of her overwork health is lost, and she either dies long before her time, or lives only to suffer the penalty of the law she has transgressed. For this course there is no justification. No woman ought to work herself to death, and no man is justified in requiring or allowing his wife to do so. He ought to furnish household machines; and if her health is poor, either help her himself, or hire a girl to help her.

This killing himself and his wife, which so many farmers do, for the sake of laying up a few dollars which they never expect to use, and which they cannot carry with them when they die, is a miserable speculation as far as profit and loss are concerned, and a sinful, shameful thing for any man to do.

Want of sleep is one of the chief causes of much of the physical and mental trouble of farmers and their families. During the busy season, when the farmer rises at four in the morning, and works till six or seven in the evening, then eats his supper, does his chores, and sits up an hour or two later to read his paper, or chat with his neighbor, he does not obtain sleep enough to keep either body or mind in perfect health and vigor. The evil consequences of his course may not be apparent for many years, but sooner or later they will come. The waste of the brain is not fully made up. Little by little it decays, and insanity or incurable disease is the final result of using the hours which should be devoted to sleep for other purposes.

Farmers' wives, who are often kept awake at night by the exhaustion caused by overwork, or by the crying and fretting of children, are the greatest sufferers, and year by year a vast number of this class go to the insane asylum or the grave. It is slow but certain suicide to curtail the hours of sleep, and no man, woman or child need expect to long continue in health without taking the fullest amount of quiet rest.—Working Farmer.

From the many movements that are made by the larynx in speaking, we infer that it is a matter of great importance that the neck in health should always be loosely dressed. Tight cravats are sure to obstruct the proper functions of this organ, and bring on irritation which may end in bronchitis or consumption.

This is an excellent practical suggestion, and we would add that the muffling of the neck, which for some time was so universal in cold weather, was a very injurious habit. The sudden transition from the unnatural warmth caused by fold upon fold of heavy woollen mufflers, to the exposure to the cold air when the muffling was thrown off, has doubtless been the cause of many severe and dangerous colds.—We are pleased to see a prudent habit prevail, and less of this muffling than was common a few years since. We need more to harden and strengthen our frames, that we may the better endure the summer's heat and the winter's cold.—As'st Ed.

Veterinary.

WORMS IN HORSES.

Intestinal worms are parasites which develop themselves in all domestic animals, each, however, possessing its own varieties. The presence of worms in the digestive tube is marked at first by an increased appetite, but the animal, notwithstanding the quantity of food which he consumes, falls off in condition; his skin is dry and hidebound; his coat is rough, and is not shed at the ordinary time; there is an annoying itching, which causes the horse to rub his upper lip against the manger or on the wall; sometimes there is a considerable itching about the rectum, which is indicated by the horse rubbing his tail or rump against anything within reach.

The symptoms mentioned are such as would lead one to suspect the existence of worms, but

it is only when these appear among the dung voided by the horse, that we can speak with certainty upon the nature of the disease. At a later period, and especially when the worms have developed in great numbers, the symptoms are very much aggravated, and the horse becomes emaciated and suffers occasionally from colicky pains; the flank is tucked up; the inside of the eyelid is pale; he walks with difficulty, and a fatal termination will sometimes ensue.

A dose of aloes (four to six drachms, made into a pill with linseed meal and molasses, and three drachms of ginger) may be given, which has often the effect of expelling worms without having recourse to further treatment. If this fails, divide six ounces of iron filings among twelve balls, and give one every morning until they are finished, and then give a dose of aloes, which will cause the expulsion of any worms which may remain in the horse's intestine.—Place rock salt within reach of the horse; this is a stimulus to digestion, and a preventative against worms.

POISONED BY A DISEASED HORSE.

The Turf, Field and Farm is our authority for the following:—

A Mr. Becker, who lives near Rondout, Ulster Co., in this State, owned a couple of horses that had the distemper. In cleaning out the mangers a few days since, the virus deposited therein came in contact with a flesh wound in his hand. In a short time his hand and arm became so terribly inflamed and swollen that the arm had to be amputated; but the poison had permeated his entire system, and he died soon after, a miserable, pitiable, horrible death.

It is not a generally accepted belief that the mucous discharge from the nostrils of a horse having the distemper is of a poisonous character. But persons owning such horses cannot exercise too much prudence in handling and tending them. It is well known that chronic cases of distemper frequently result in glanders, the mucous from which is a deadly poison.

ANNUAL REPORT OF THE DIRECTORS OF THE WESTERN FAIR ASSOCIATION, FOR 1872.

In placing before the patrons and friends of the Western Fair, and the community at large, a statement of the proceedings of the Board of Directors, for the year 1872, and the results thereof, your Directors feel that their success justifies them in the course which they have taken.

In several classes the exhibition of 1872 was in advance of any previous one held in this Province; and altogether it has proved, as anticipated, highly successful, and is so far a proof that this Western section of Ontario requires, and is prepared to sustain, an institution of this kind.

Your Directors, flattered by their previous success, enlarged the prize list for 1872, to the amount of \$10,000—just four times the amount offered in 1868; and they are gratified to say, as the Treasurer's report will show, that they were justified in so doing. The following statement will show the growth of the institution since its formation in 1868, viz.:—1868.—Prizes offered, \$2,500. Number of entries, 2,037. 1870.—Prizes offered, \$6,000. Number of entries, 4,169. 1871.—Prizes offered, \$8,000. Number of entries, 6,130. 1872.—Prizes offered, \$10,000. Number of entries, 7,079.

A new feature was introduced in the Prize List for the past year, viz., the withdrawal of prizes for the heavy classes of agricultural implements, such as Mowers, Reapers, Threshers and Drills. This course seems to have given almost universal satisfaction to the manufacturers, who showed their approval to this measure by making a much larger display than on any former occasion.

The visit to the Fair of His Excellency the Governor-General and Lady Dufferin was a gratifying event, inasmuch as it afforded an opportunity of presenting to their notice some

indication of the wealth, intelligence and industry of the Western section of the Dominion.

To the Managing Directors of the respective railway running into London your Directors feel much indebted for the facilities afforded by them in the conveyance of stock, goods and passengers, at reduced rates.

Your Directors also desire to express their thanks to the ladies and gentlemen who, with inconvenience to themselves, undertook and discharged an arduous duty as judges, and of whose awards very few complaints have been made.

Owing to the holding of the Provincial Exhibition in this city next fall, there will be no Western Fair for 1873. In the meantime the Associate Societies will be preparing to make a hearty effort in 1874.

THE CANADIAN DAIRYMEN'S ASSOCIATION.

The Sixth Annual Convention of the Canadian Dairymen's Association will be held in the Town of Ingersoll, Ont., on Wednesday and Thursday, Feb. 5th and 6th, 1873. X. A. Willard, A. M., will deliver the Annual Address. Prof. Caldwell, of Cornell University, Ithica, N. Y., will address the Convention on "Soiling," Prof. Bell, of Albert College, Belleville, and Rev. W. F. Clarke, will also address the Convention on subjects of their own selection. Hon. A. McKellar, Commissioner of Agriculture, and Prof. B. K. and if their duties will permit, will also be present.

These meetings have always been the best and most useful agricultural meetings we have attended. We advise all our readers that can conveniently attend not to miss the opportunity. If you cannot go yourself send some of the younger branches of your family. It is one of the best schools for young, or even old, farmers in Canada.

Group of Lincoln Ewes,

Imported by, and the property of Richard Gibson, London, Canada.

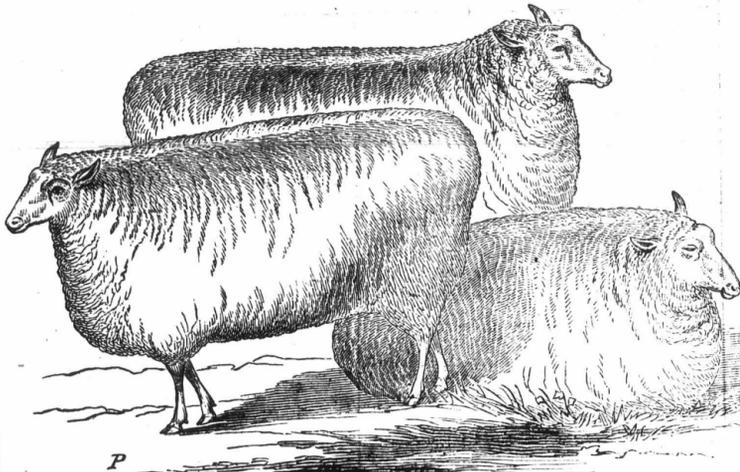
We have pleasure in introducing to our readers these illustrations of that very valuable stock—the Lincoln sheep. This class of sheep are, in many instances, preferred to the Leicester or Cotswold. Mr. Gibson has spared neither pains nor expense in introducing this class of animals into our country. His flock stands unrivalled in Canada. The Lincolns are unsurpassed by any other class of sheep in the length of wool and weight of carcass. The group consists of two two-year old sheep, the one in back ground and the one lying down bred by Mr. Clarke; got by a ram purchased from Mr. Kirkham for 130 Guineas. Winners of First Prize, 1872, at

the Lincolnshire Show; First at Provincial of Canada, at Hamilton; First at New York State Fair at Elmira; and First at the Western of Canada, at London.

The one in the fore-ground, standing up,—a shearling—was bred by Mr. Byron, and won First Prize at Doncaster, England; First at Lincolnshire in competition with all breeds of long wools; 2nd at R.A.S.C., held at Cardiff; Second at Provincial of Canada, at Hamilton, being beaten by the two-year old ewes above mentioned; First at Elmira N.Y. State Fair; and First at the Western of Canada.

She was sired by the same ram that got the wethers which won First prize in their classes at the Birmingham and Smithfield fat stock shows in 1871; also £20 cup as best of the long-wools exhibited, and champion piece of plate (value £50), for best sheep of any breed exhibited. Also in Dec., 1872, of the wethers that won at Birmingham and Smithfield these took First Prizes in their class, and £20 silver cup, as best of long wool sheep of any variety.

"Why should we celebrate Washington's birthday more than mine?" asked a teacher. "Because he never told a lie!" shouted a boy.



GROUP OF LINCOLN EWES.

THE PROSPERITY OF ILLINOIS.

Following the snow storm of Thursday night last, I think we have had some of the coldest weather I remember. They talk of the mercury going down to 32° below zero.—Two years ago, at this time in the month, we had a similar week; one year since it came a week earlier—the cold seeming to increase with the increasing drouth of each season. The amount of suffering caused by this weather on the western plains and prairies, to human beings and domestic animals, no one who has not had personal experience can have any conception of.

Never has the old world greeting of the season, "I wish you a merry Christmas," had such a sarcastic and bitter significance as it has to thousands to-day. On half the prairie homes of the West I suppose there is privation; and on half of that half I believe there is an actual want of the bare necessities of life. I have never seen so much gloom, so much dullness, so much doubt and so much anxiety, among farmers and business men, as at the present time. The great winter festival of the year is passing by with scarce a tenth the recognition of former times. A great many of us are beginning to see and understand that we, for the last five or six

years, have been growing poor, year by year; and we begin to see, too, if we do not arrest this downward tendency, we shall arrive at bankruptcy and poverty in a few years more. To liquidate our debts and to pay our taxes now is our great aim and object; and, as hard as the lesson may be, we are about ready to own and acknowledge that we and our families must submit to personal privation to succeed. We have been borrowing money privately and voting taxes publicly, in order to get out of debt; and, contrary to our expectations, we find ourselves nearly on the verge of destruction.

I should be glad to believe that we had reached bottom—that things could be no worse, and therefore they must mend, but I doubt it. However, from the first of October until after the holidays to January, has been the busy season for many years—until this year, when the dullness of January and February appeared even a month before the holidays came in. It is possible that with the coming of the new year there may come better feeling, better prices, and a more prosperous outlook. So early in the season I may say that there is already a strong sentiment abroad among farmers that the crops of corn of 1872 is the last crop they intend or mean to make and sell at 20 to 25c. the bushel.—Correspondence of Country Gentleman.

While at the Hamilton Fair, the great members present and accounted that the loss of those keeping in quarters in a bad state. He could give an epidemic bees are kept the whole. under my to be in a were dead were on from the gro that fail-d success in th

The above cut the Jan. ADVOCATE each number containing articles and it.

We can our readers pleased with specialities continued to such a kind. It is of and the. Those who subscription same berries for 75 per annum would send a postal We introduced that morality "Good"

The Apiary.

COMMUNICATED.

While at the Bee-Keepers Convention, held at Hamilton at the time of the Provincial Fair, the question came up, viz., the cause of the great mortality among bees last winter? Many opinions were given. Most of the members present had lost more or less bees, and accounts from far and near went to show that the loss was great some losing all; those keeping bees largely being the greatest losers in proportion. It would appear that those most experienced bee-keepers in some cases were the greatest losers. Mr. Thomas said he placed his bees in their winter quarters in good average condition, and about mid-winter he by chance observed them to be in a bad state, and eventually they all died. He could give no cause, but supposed it to be an epidemic. In this section of the country bees are kept mostly on their summer stands. The loss was about one-third or one-fourth of the whole. One lot of nine stocks which came under my notice about mid-winter were found to be in a very damp state, and some of them were dead with honey within reach. They were on low stands, about nine inches from the ground. They all died but one, and that failed to swarm. Those having the best success in this section are those who take the

least care of their bees, and let them stop in their summer stands in the open ground where the sun and wind had free access. Very few stocks perished standing out in the open air. I purchased a stock that was wintered beside the fence without care or attention, which swarmed twice and stored some top honey, and is now in good condition and standing on the summer stands. Stocks should be in good condition. Weak stocks require the best of care at all times, and stocks that swarm late are in danger as the young queen may fail to bring on a young brood to renew the constant falling off, which is always the case. We find by Italianizing that the old bees pass off in about two months if the queen is not prolific or no young bees in the hive to brood over the eggs which the queen may produce, failure is the result. Such stocks can be assisted by giving them a card of brood from another stock. The best position for weak stocks is on the south side of a building, and set near together with boards at the back and straw packed between them, a board set up at the front, which should be turned down on warm and sunny days. Feeding may be done if necessary. To feed affectionately you require to bring the feed to them by some contrivance called bee-feeders. The best bee feed is made of refined sugar into a syrup. A cheap feed is made of common sugar, two and a half pounds, made into

a syrup; one and a quarter pounds of corn starch boiled and made thin as syrup; one-fourth of an ounce of slippery elm, made thin by beating with warm water until as thin as syrup; add one-fourth of an ounce of gum arabic, and one half a teaspoonful of salt to the syrup, turn all together and strain through a linen cloth, and it is fit for use. Examine your bees, and if scant of honey lift out a back card and lay it down flat; then drip the feed over the card until filled; then replace it, putting the feed next to the bees. See that there is an opening in the cards in the centre of the hive for the bees to pass through. Some object to their bees coming out never to return. I like to see my bees coming out on bright days in winter. If the stock is strong there is many old bees come out never to return. If the stock is weak and mostly young bees there will be very few bees fall to the ground. It is absolutely necessary for bees to fly out in the open air to discharge their foetus. If confined they smear the interior of the hive and boxes and the epidemic follows.

Coburg, Ont.

B. LOSEE.

FOR BEGINNERS WITH BEES.

A writer to the Mail offers this trio of suggestions:—

1. Do not go headstrong into this or any

other branch of rural industry. Be content with small beginnings and take time to gather experience. Commence with one stock of bees; and before you buy even one, get some recent treatise on bee-keeping, and post yourself at least in regard to the outlines of apian science.

2. Begin with a movable frame hive of some sort. Bees have been kept advantageously, and may be still, in straw or common box hives; but to attain the best results, a movable frame hive is necessary. This kind of hive admits of access to the bees and control over them; and from one season's observation of such a hive, more may be learned about bees than by keeping them twenty years in a straw or box hive. A single stock, in such a hive, will cost \$10, inclusive of patent right, and surely this is not an investment, to begin with, that need frighten anybody.

3. Do not expect sudden and wonderful profits, nor be discouraged by reverses. There is no more speculation in bee-keeping, any more than in any other branch of rural economy. Here, as elsewhere, diligence, care, energy and perseverance, are essential to success.



GOOD COMPANY.

Good Company.

The above is the name of a very good family paper published in Toronto. The above cut is one of the illustrations for the Jan. No. It is the same size as the ADVOCATE. It gives a page of music in each number. The reading matter is entertaining, instructive and amusing; politics and advertisements have no space in it.

We commend this paper to the notice of our readers as being one that they will be pleased with. We approve of the plan of specialities the journal will furnish—continued tales of thrilling interest, and of such a kind as not to be injurious.

It is our intention to offer this paper and the ADVOCATE for \$1.75 per annum. Those who have already sent in their subscriptions to this paper may receive the same benefit; they can have it sent by us for 75c. The price of the paper is \$1 per annum. If any of our subscribers would wish to see a specimen number, we will send one free. You can address us on a postal card, that will only cost one cent. We introduce this journal to you, believing that we shall be introducing to you morality, music and entertainment in 'Good Company.'

"Arthur Bonnycastle," by J. G. Holland—an exceedingly interesting tale—commences in the Jan. No.

The Old Way and the New.

BY JOHN B. YATES.

I've just come in from the meadow, wife, where the grass is tall and green; I hobbled out on my cane to see John's new machine, It made my old eyes snap again to see the mower mow, And I heaved a sigh for the scythe I swung some twenty years ago.

Many and many's the day I've mowed, 'neath the rays of a scorching sun, Till I thought my poor old back would break ere the toil for the day was done; I often think of the days of toil, in the fields all over the farm, Till I feel the sweat on my wrinkled brow, and the old pain come in my arm.

It was hard work, it was slow work, a swinging the old scythe then; Unlike the mower that went through the grass like death through the ranks of men; I stood and looked till my old eyes ached, amazed at its speed and power The work that it took me a day to do, is done in one short hour.

John said that I hadn't seen half; when he puts it into his wheat, I shall see it reap and rake it and put it into bunches neat; Then, soon a Yankee will come along, and set to work to learn To reap it, and thresh it, and bag it up, and send it into the barn.

John kinder laughed when he said it, but I said to the hired men: I seen so much in my pilgrimage through my three score years and ten, That I wouldn't be surprised to see a railroad in the air, Or a Yankee in a flying ship, a goin' on at any where.

There's a difference in the work I did, and the work my boys now do, In mowin' the grass the old way, and a mowin' it in the new; But, sometimes I think there was happiness crowded into those toiling days, That the fast young men of the present will not see till they change their ways.

To think that I should ever live to see work done in this wonderful way! Old tools are of little service now, and farmin' is almost play; The women have got their sewin' machines, their wringers and every sitch thing, And now play croquet in the doo-yard, or sit in the parlor and sing.

'Twasn't you that had it so easy, wife, in the days so long gone by; You riz up early, and sat up late, a toilin' for you and I. There were cows to milk, there was butter to make, and many a day did you stand A washin' my toil-stained garments and wringin' 'em out by hand.

Ah! wife, our children will never see the hard work we have seen, For the heavy task and the long task is now done with a machine; No longer the noise of a scythe I hear, the mower, there! hear it afar! A rattlin' along through the tall, stout grass with the noise of a railroad car.

Well! the old tools are now shoved away; they stand a gatherin' rust. Like many an old man I have seen put aside with only a crust; When the eyes grow dim, when the step is weak, when the strength goes out of the arm, The best thing a poor old man can do is to hold the deed of the farm.

There is one old way that they can't improve, altho' it has been tried By men who have studied, and studied, and worried till they died; It has shone, undimmed for ages, like gold refined from its dross, It is the way to the kingdom of Heaven, by this simple way of the Cross.

Orchard and Forest.

THE WILD GOOSE PLUM.

It ripens this year from the middle to the end of July. It has not been entirely curculio proof, but, compared with our common domestic plum, it is comparatively exempt from curculio attacks and the rot which supervenes in moist weather. It has been excessively wet, but this sort has not rotted in the least. It is said that they have now in the South several improved varieties of the Chickasaw species of plum, which, although inferior in quality to the Gages, &c. are worthy of cultivation. The earliest good variety is Caradence; fruit of medium size; round, yellow, with brown, red cheek; flesh melting sweet, and vinous, slightly adhering to the stone; ripens end of May.

[Augusta, Georgia.] This variety shows hybrid characteristics. Next is the Wild Goose, a large, bright red fruit, a basket of which is an attraction to customers to any fruit dealer's stall. We end the season with Mountain and Newman's, both improved Chickasaws. The latter ripens from middle of July to middle of August, and is an extraordinary prolific variety. This is only a beginning of the introduction of a new race of plums, upon which the curculio seems to have no destructive power.

TRANSPLANTING IN THE NIGHT.

A gentleman, anxious to ascertain the effect of transplanting at night, instead of by day, made an experiment with the following results:

He transplanted ten cherry trees while in bloom, commencing at four o'clock in the afternoon, planting one each hour until one o'clock in the morning. Those transplanted during the daylight shed their blossoms, producing little or no fruit, while those planted in the dark maintained their condition fully. He did the same with ten dwarf trees, after the fruit was one-third grown. Those transplanted during the day shed their fruit; those transplanted during the night perfected their crop, and showed no injury from having been removed. With each of these trees he removed some earth with the roots. The incident is fully vouched for, and if a few more similar experiments produce a like result, it will be a strong argument to horticulturists, etc., to do such work at night.—*Western Rural.*

SETTING OUT TREES BY THE ROADSIDE.

The growth of timber, to take the place of our rapidly disappearing forests, has led farmers in some sections to plant out trees. While it may not be convenient or desirable for all to adopt this plan, every one can set trees by the roadside along his own land. There are many advantages to be obtained from them which can be seen at once to more than pay for the trouble. They beautify the premises and give a better appearance to the landscape. And if the trees are maple, which is one of the best and most easily raised, when grown they will furnish a large yield of maple sugar. If butternut or walnut, the nuts are in a measure a compensation for the labor of setting them out. There is to be in the future such a demand for wood, that it will not answer to cut them down and not replace them in some way. In Baden and other German States, as well as in some of the countries of France, the law obliges a person to plant a tree in place of every one cut down. In this way miles of rows of shade trees line the roads, making pleasant shaded walks through all the towns and villages. It is a fact not generally known that trees increase their wood-making capacity in about the ratio of the square of the number of years indicating their age. The third year they make nine times, the fifth year twenty-five times, and the tenth year one hundred times the amount of wood they make the first year. The tree grows more rapid as it gets older, and we cannot afford to cut them down until they get their growth.—*New England Homestead.*

TURPENTINE FOR BARK LICE.

A. C. Brinton, of Wilmington, Del., writes to *Moore's Rural New Yorker* that he has tried spirits of turpentine for bark lice with excellent results. Having an old paint brush that had become hard for want of proper care, he soaked it in spirits of turpentine, working out the paint until the brush was soft and pliable. Then, instead of throwing away the mixture, he went into the orchard and applied it to one apple and a pear tree, which were infested with bark lice. The trees were thoroughly painted from top to bottom, the application being made last April; and at this time the trees are in a flourishing condition, and no lice or their shells to be found. We had supposed that ordinary paint, as well as spirits of turpentine, were injurious to trees; but they may not be when applied to the bark before the leaves appear. The experiment of killing bark lice with turpentine is worth a trial by those who have apple orchards infested with this great and constantly increasing pest.

Recipes.

CLEANSING BLANKETS.

It is quite as important to have the blankets on our beds clean as to have the sheets pure and white. The foul emanations which they absorb in time make the bed anything but sweet. The Boston Journal of Chemistry gives the following method of cleansing blankets:—

Put two large tablespoonfuls of borax and a pint bowl of soft soap into a tub of cold water. When dissolved, put in a pair of blankets, and let them remain over night. Next day rub and drain them out, and rinse thoroughly in two waters, and hang them to dry. Do not wring them.

But this is not the only domestic use to which borax may be put. Says the same journal:—

Borax is the best cockroach exterminator yet discovered. This troublesome insect has a peculiar aversion to it, and will never return where it has once been scattered. As the salt is perfectly harmless to human beings, it is much to be preferred for this purpose to the poisonous substances commonly used.

Borax is also valuable for laundry use, to about ten gallons of boiling water, and you need use only half the ordinary allowance of soap. For laces, cambrics, etc., use an extra quantity of this powder. It will not injure the texture of the cloth in the least.

For cleansing the hair, nothing is better than a solution of borax water. Wash afterwards with pure water if it leaves the hair too stiff. Borax dissolved in water is also an excellent dentifrice, or tooth wash.

RECIPE FOR CURING MEAT.

The 'Germantown Telegraph' gives the following directions for curing beef or pork:

To one gallon of water take
1 1/2 lbs. of salt,
1 lb. of sugar,
1/2 oz. of saltpetre,
1/2 oz. of potash.

In this ratio the pickle can be increased to any quantity desired. Let these be boiled together until all the dirt from the sugar rises to the top and is skimmed off. Then throw it into a tub to cool, and when cold, pour it over your beef or pork, to remain the usual time, say four or five weeks. The meat must be well covered with pickle, and should not be put down for at least two days after killing, during which time it should be slightly sprinkled with powdered saltpetre, which removes all the surface blood, &c., leaving the meat fresh and clean. Some omit boiling the pickle, and find it to answer well, though the operation of boiling purifies the pickle, by throwing off the dirt always to be found in salt and sugar.

If this receipt is properly tried, it will never be abandoned. There is none that surpasses it, if so good.

CHEAP COLORING.

For Slat Color, take sumac berries, and boil them in an iron kettle in soft water, a gallon of water to a quart of berries. Throw a few bits of rusty iron into the liquid, to set the color; wash the goods in warm soap suds, and then put in the dye; bring to a boil, and then let it stand where it will keep hot for half an hour. Rinse in salt and water, and then wash in soap suds and dry. It will color either cotton or woolen goods a nice color.

For Brown, take the shucks from butternuts, and boil in the same manner. If rusty iron is scarce, a piece of copperas the size of a robin's egg will answer nicely. You can color every shade of brown, from the lightest to the very darkest brown, by keeping in the dye a longer or shorter time. The color is a good durable one, and does not rot the goods.

To Color Nankeen, take two quarts of hemlock bark to a gallon of water, boil in brass; set with copperas, wring the goods from hot soap suds, and dip in the boiling dye till you have the right shade; dry the goods before rinsing in salt and water.

PENNSYLVANIA AGRICULTURAL COLLEGE.

The Pennsylvania Agricultural College, according to a lady who has explored it, and written of what she saw and experienced, to the *Germantown Telegraph*, is chiefly remarkable for its cheerless, cold and filthy halls and dormitories, and the unwholesome condition of its surrounding grounds. The students seem to be well fed, but the picture given of the institution otherwise, if true, is disgraceful to the great State of Pennsylvania. We notice this report reluctantly, especially since it concerns a sister State; but we do it in behalf of the boys and girls of farmers who, in their efforts to obtain education, deserve decent treatment, and to be taught the decencies of life at least.—*Rural New Yorker.*

[We have the pleasure to acknowledge the receipt of many communications from our agricultural subscribers, some of them very interesting. We can only give such extracts as are interesting to our readers, and most conducive to the improvement of agriculture, to which our paper is chiefly devoted. On the Cultivation of Turnips we have received sixteen essays, all by practical farmers. On this we will treat by itself. We proceed with extracts from our correspondents.]

Correspondence.

CORRESPONDENCE FROM BRANTFORD.

SIR,—I have not forgotten your valuable paper, which I consider is getting better every month. I think it is a paper which every farmer in this beautiful Dominion ought to have in his house.

The McCauley wheat I got from you last spring did pretty well, taking into consideration the very dry summer we had and the place where I sowed it being on a high, dry piece of ground. A good many of my neighbors want some of it for seed, as it is very clean and good.

The Farmers' Club which we established in our School Section last winter is again setting on famously. The attendance during the summer was small, but as the days got shorter the farmers came out more generally. We have had some very interesting and instructive discussions during the last few weeks.

I cannot quite agree with a paragraph in your last issue but one, from a Vice-president of a Farmers' Club, in which he says that he cannot see any good in agricultural papers. I know that I for one have received a good deal of benefit by reading them, and any man can find something useful to him in every paper of the kind.

There is one subject I am pleased to see so fully treated, that is, the "Butter Trade" of this country. There have been some articles on this subject which say that the farmers themselves are to blame for the poor quality of butter which has been exported from Canada for the last few years, but I am quite sure that the farmers are not altogether to blame in this case. The merchants in the small towns and villages are the most in fault. During the warm summer weather, when butter is most plentiful, they will buy any and all butter, no matter what quality, that comes to market; they then put it in their cellars along with all kinds of groceries, liquors, &c., and often with a coal oil barrel next to it. They pack all grades and qualities in the same tubs, and keep them in the exquisite atmosphere of a grocer's cellar for perhaps two or three months. Now, you know, sir, that there is nothing that will taint more from bad smells than butter, and I for one do not wonder at the low price such an article brings in the English markets. Certainly there ought to be something done to remove the bad reputation our butter has got. I would just suggest one or two remedies which would at least help us. When farmers have a surplus supply let them get new tubs and pack their butter themselves, and when they take it to market let there be a butter inspector who is qualified to judge, and let him mark the packages according as they are good, bad or indifferent. This would at least be a protection to the merchants who buy this butter, and if the farmer found his butter marked bad and got his price accordingly, he would take some means to have his next lot better, if possible.

The buyers in the small towns must be heavy losers this year, if you look at the local markets during the past season and compare them with the reports of to-day of the Toronto and Montreal wholesale butter markets. They will be more careful in the future, and I think farmers as a class will have to make better butter to get a remunerative price, for the next two or three years.

I contend that there is no good reason why our butter should be so bad; we have surely as good a climate and as clever people as the State of New York, yet their butter will bring from 15 to 25 cents per pound more in the Eastern markets than ours, and the dealers on the other side, when they get a bad quality of butter, no matter where it comes from, brand it "Canada" and thereby prejudice the minds of the consumers against our butter, and are actually ruining the trade in one of the chief exports of the Province.

It is surely time something was done in our own defence, and I hope that these few suggestions will lead some of your older and more experienced subscribers to give us, through your columns, their thoughts upon the subject. With well wishes for your prosperity, I remain yours truly,
"A FARMER."

Brantford, Dec. 16th, 1872.

FARMERS' CLUB.

SIR,—The Township of Hamilton Farmers' Club met at Cobourg on the last Saturday of November. The day was cold and the attendance small.

The President took the chair, and the Secretary read a report of their proceedings, setting

forth the various subjects that had been discussed in the year; that these discussions had all been published in the local papers, and some of them copied into the general papers. He regretted that so very few of the farmers took an interest in the proceedings; a well conducted Farmers' Club serves to create and encourage an inquiring spirit, leads the farmer to reflect and digest upon his observations, and to read more carefully and understandingly; to make experiments and to make them accurately, so as not only to satisfy his own mind but also the minds of others. Our farmers are not wanting in talent or natural capacity, but they want the practice to explain to others clearly and forcibly their own persuasions and opinions. This practice was afforded by a Club, where every one felt free to express himself, and was obliged to contribute something to the general fund.

The gentlemen who were to have introduced the subject for discussion—the Rotation of Crops—were both absent, but one of them sent a paper to be read to the meeting. The paper set forth the necessity of rotation and the importance of the subject; the old rotation was to plough, plough, and sow wheat, and this time-honored rotation had been eminently successful in producing in the present day an abundant crop of debts, duns, and mortgages, and in almost driving some of our best cereals from the country. Our wheat—our pride and glory—which in the days of yore used to be bowed down with its load of golden grain, now hangs its head in very shame at the treatment we have given it. He called upon farmers for the honour of their profession to rise and restore their soils by a thorough system on a good rotation, as without a proper system the rotation of our lands to their former fertility would be a very slow undertaking.

The subject was then fully discussed by the various members present, each one setting forth his favorite rotation. Some thought that they ploughed too much land, others that as much money might be made from the soil as from the plough, and that if they pastured their land longer it would produce more grain when they did plough it up. The following, with some variations, seemed to be the most favorite rotation:—To break up the sod and sow it with peas, then wheat, then oats, then plowing and following, then barley or wheat, seeding down with clover, and allowing the land to lie one, two or three years, manuring or pasturing as wanted.

The officers of the Club were then elected, as follows:—John Pratt, President, Walter Riddell, Secretary, and John Henderson, E. Bellerby and Peter Sidey, the committee of management.
A SUBSCRIBER.

Cobourg, Dec. 11, 1872.

SEED AND FRUIT.

SIR,—I see by your report of the comparative yield and merits of the different kinds of wheat, that the result of your observation and experience differs somewhat from mine in this section of country.

Now, in reference to the Scott wheat, you speak of it as quite a new kind just being introduced. Now it has been quite common in this section of country for four or five years, and is generally admitted to be a good kind of wheat; but where the Deihl and bald Treadwell have been tried, as far as my observation goes and the testimony of my neighbors, they excel it both in yield and quality. You admit that the Deihl does well on the borders of Lake Erie; this I believe to be a fact, as here on the ridge, some four or five miles from the Lake, it does splendidly.

The bald Treadwell, I believe, does much better here than the barded, and I have sowed the Scott and the bald Treadwell side by side, in the same field, on the same day, in the same quality of soil, and treated both alike and the Treadwell yielded far the most and of the best quality. The potatoes you sent me last spring have done well.

A few words now in reference to fruit in this section. It has been abundant; all kinds cultivated here do well. Apples in this section, where well cultivated, have always been of a superior quality on account of the entire absence of the apple worm. The cause of its absence I am unable to give, when it is so great a pest in other parts of the country not far distant. I have noticed a discussion, either in the *Advocate* or *Canada Farmer*, in the course of a few years back, on the subject of bark and wood killing on high-headed apple trees—almost universally attributed to frosty winter winds, on account of the exposed state of the body. Now, this I consider an error, for three reasons: 1st, if caused by frosty winds, a low-headed tree would suffer as much as a high one, inasmuch as by the action of the top, near the ground the winds are brought more fully to a focus against the body. 2nd, if caused by that, a straight tree would be as likely to suffer as a slanting one, which I have never known to take place. 3rd, because all the trees I have ever known affected in this way, had small tops and were leaning from south to

north, or from south to north, they were the rays of the sun, the sole cause.

Howard, Se.

[We are pleased to see parts on any of our localities some others. Many with us in the ally as regards further south the Deihl—E.]

PROPOSED T.

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SIR,—I send Witness, cont. be discussed a minion Board.

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FRUIT SIR,—I be reliable, and tical agricult may importa

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Some of pooh this, b Beverly the

north, or from southwest to northeast, consequently they were fully exposed to the direct rays of the midsummer sun, which I think is the sole cause of all the trouble.

Howard, Sept. 9th, 1872. JOHN BONHAM.

[We are pleased to hear accounts from all parts on any agricultural subject, even though at variance with our own ideas. In different localities some varieties will succeed better than others. Many may and no doubt will agree with us in the remarks we have made, especially as regards this section; even in localities further south the Scott wheat is preferred to the Deihl—Ed.]

PROPOSED TAXES ON IMPROVED ESTATES AND OTHER MATTERS.

SIR,—I send you a strip from the Montreal Witness, containing suggestions for matters to be discussed at the coming meeting of the Dominion Board of Trade.

You may notice there is a suggestion from Toronto for a tax on "improved estates of the country, in consideration of their protection and increase in value." Respecting which I would observe the same reasons might be given for a tax on improved estates in villages, and especially cities, because they too are "protected and increased in value."

I believe that last year Mr. Wilkes, of Toronto, proposed a tax on the "transfer" of farm lands. I wonder if the two bright ideas originated in the same fertile brain. There is a family likeness between them.

Opinions differ on most subjects; my opinion is that it would be much more consistent with the principles of political economy to tax the sale of plate and jewelry, than land. Farms are necessary to our very existence as a civilized people, but we could very well spare both Mr. W. and his goods.

Respecting our intercourse with the United States, I cannot see either sense or justice in admitting their agricultural products free, while they tax such as we sell to them. Free trade is best, but if we cannot reciprocate free trade, tax both parties alike.

Would it not benefit the country at large to have an inquiry into the circumstances under which the late horse disease originated? It might furnish hints both for the prevention and cure of it when it breaks out again, which I think is likely, for though the late outbreak is the first we know of, it may not be the last.

I suppose there was a time when small-pox, cholera, diptheria, &c., were not—but they have been and will be.

A thorough search into the circumstances which originated the late very prevalent disease, and a publication of the results might throw light on epidemics in general and benefit the human race. I think many horses are seriously and permanently injured. Do you know of a reliable remedy for the cough which remains?

Is it not very desirable that we farmers should have an association to discuss and advocate our interests, the same as traders and mechanics have? There are difficulties in the way, farming is less profitable than trade, and does not so freely furnish the funds for a liberal education, and, supposing the education to be obtained, farmers are so isolated from men in general and from each other, that an education is not of the same advantage to them, for want of social intercourse—even as it is written, "as iron sharpens iron, so doth the countenance of man his friend."

Yours, &c., THOS. G. SMITH.

Bramley, Jan. 8th, 1873.

[Thanks to our Bramley friend for his communication and enclosure. Will be kindly let us hear from him more frequently. We entirely concur in his opinion as to the good farmers might derive from an Association such as he recommends. He will see that we have taken up some of the topics in the Recommendations and Resolutions.—A. E.]

FRUIT GROWING IN BEVERLY.

SIR,—I believe your paper to be the most reliable, and, at the same time, the most practical agricultural journal in the country. You may publish the following if you think it of any importance:

In different parts of the country there are tracts of land so very stony and rough as to be wholly unfit for cultivation. During the summer months all vegetation is withered up, except, perhaps, a few hardy mullens growing in the fissures of the rock. Now, if the owners of this land would substitute apple trees for the mullens, it would become in a few years the most remunerative part of their farms—thoroughly underdraining, so essential to the health of fruit trees, is obtained by means of the fissures in the rock. The trees send down their roots into the cracks and crevices, and obtain plenty of moisture and nourishment. The trees are hardier, healthier and freer from insects than those growing in deeper soils.

Some of your readers will probably poo-poo this, but if they will visit the township of Beverly they will find some thriving orchards

which look as if they were growing out of the solid rock. In our own orchard we have grape vines, peach, dwarf pear and apple trees growing in from two, four, to six inches of soil.

I will probably write an article on "Swamp muck as a fertilizer" for your next issue. Wishing every success to your valuable paper, I remain yours, etc., R. K. KERNIGHAN.

Rockton, Dec. 23rd, 1872.

[In this part of Ontario we are not acquainted with a soil such as our Rockton, correspondent writes of. The letters of practical men, those especially who are close observers of everything connected with the land and its varied products, can never be unacceptable. We had some experience of the fertility of a rocky soil. We look for the communication he leads us to expect.—A. F.]

The following extracts demonstrate the advantages farmers derive from the Agricultural Emporium, by the satisfaction of the writers with the seeds furnished:

SIR,—I feel it my duty to inform you of my success with some seeds I purchased from you last spring.

First, one peck of King of the Earlies purchased for me by one of my neighbors, Mr. A. T. Augustine, in March last, produced eight and a half bushels of good, sound potatoes, considerably earlier than the Early Rose, and plenty of Colorado Bugs in the bargain.

From one peck of your McCarling Wheat I got nine bushels and forty pounds of good, clean wheat, by weight.

I like the Advocate very well, and want to renew when my subscription expires. Wishing a happy New Year to you and success to the Advocate, I remain yours, &c., ISAAC BEARSS.

Arkona, Dec., 1872.

SIR,—My McCarling Wheat done well. I raised about seven pounds from the one pound received from you last spring; I sowed that and it yielded two bushels. It was a heavy crop, though not as good a sample as last year.

Ross, Jan. 1st, 1873. ROBERT BULMER.

SIR,—I here enclose one dollar for your valuable paper, as I think it is a paper that every farmer should take.

From the twenty pounds of McCarling Wheat that I received from you, I had eight bushels and twenty pounds of nice wheat.

Hamburg, Dec. 24th, 1872. T. D. CRIGHTON.

Our readers will kindly excuse us for publishing the extracts we give beneath from letters relative to the Farmer's Advocate and the Agricultural Emporium. In them we do not commend ourselves; we merely give a portion of what others testify of the profits they have received.

SIR,—I cannot refrain from expressing my entire satisfaction with the manner in which the Advocate, as well as the Emporium, has been conducted, and my regret that the services of one who has done so much for the farming community of this Dominion should not receive the recognition they deserve at the hands of the Government.

Your paper and Emporium are institutions of such intrinsic value to the farmers of this country that the number of your patrons must soon be such as to make their influence felt even in our Legislative halls—when, I trust, they will not be slow to appreciate the enterprise as well as devotion to agricultural interests, with which you have conducted your business.

Westmeath, Dec. 28th, 1872. WALTER FINDLAY.

GOVERNMENT IMPORTATION.

SIR,—A heavy snow storm has lasted all week, and the roads are drifted full. The farmers can do nothing but attend to their animals and keep them as warm and well fed as possible—hard enough to do, as the frost is intense. Plenty of time now for farmers to write for the Advocate, as you want them to and as they should do.

I wish to aid you with my very small modicum of influence in going against a Government turning farmer or importing stock. It may all be very well at first, but it sure to end in a job some day. Canadian farmers have done well and are doing well, without any such manœuvres. All we want is fair play—a fair field and no favor.

The Hon. George Brown is one of our largest importers, and it seems to me his interest would be to go dead against the proposed Government scheme; but there are wheels within wheels.

Respectfully yours, A HUNON FARMER.

[A farmer's opinion of the Government scheme of importing improved farm stock furnishes additional testimony that our opposition to the project is judicious and opportune.]

SIR,—You will find enclosed the sum of two dollars, payment for my own and Thomas Bean's Advocate for the present year. I may just state that I like the Advocate better than ever, and I think that no farmer should be without it. Every number contains such a fund of information as will not be easily dispensed with by the practical agriculturist.

I think that the Emporium is also doing a vast amount of good in the country in dispensing new kinds of seeds, &c. The pound of McCarling wheat which I purchased from you in the spring of '71, yielded in that year 63 pounds. After losing a little by waste, I sowed what I had in the spring of '72 on a little less than an acre of land, and it yielded 30 bushels of good, clean wheat, and this with only ordinary cultivation. I still think that it is an excellent variety, and well worthy the favorable consideration of the farmers of Canada.

Yours truly, WM. BEAN.

Brookdale, January, 1873.

PROFITS FROM AN AGRICULTURAL PAPER.

SIR,—During the past year I have gathered much useful information from your journal, which has been regularly received. I have followed its advice to a great extent in conducting my farm, and always with profit.

I enclose you the amount of my subscription, which is a small item compared with the profits which have accrued to me from the use of one of its receipts only. Very truly,

WM. P. COCHRAN.

Richwood, Dec. 28th, 1872.

[In reply to Mr. Cochran, we have merely to say that we hope the Advocate for 1873 will be superior even to what it has been. Our aim is to make it worthy of the patronage it has received.]

A GOOD RECIPE.

SIR,—I have a recipe, which, if properly applied, has an amazing good effect upon farmers' boys, keeping them at home in the evenings when they ought to be there, and making them love home better than any other place on earth. Here are the ingredients:

Make them partners with you; give them to understand that they are interested in the success of the farming operations as much as you are yourself. Converse freely with them. Get their opinions, and give them yours; if at all prudent, make use of their plans, and when you think your own best, explain to them why you do not adopt theirs. Don't keep them altogether in the dark with reference to your plans in the future.

Don't require them to stay at home in the evenings all the time; when there is any meeting or entertainment from which they might receive benefit, be sure to let them go. Provide them with plenty of good books and papers, especially those referring to agriculture. Let them get well posted in their own business—farming.

Never scold them because they don't do their work or attend to the business of the farm as well as you do. Encourage them. Give them a holiday now and then; they look for it and they need it; and it will be better for you and them to let them have it.

Farmers, try my recipe; it acts like a charm.

J. LAWSON.

Battersea, Dec. 1th, 1872.

Charles Skelding, of Nisouri, Devises Post Office, writes to tell us of the profits he has derived from breeding from a good sire.

Three years ago he paid for the services of "Anglo Saxon," \$15. Some of his neighbors called him a fool for his extravagance in paying such a sum. They paid \$5 for the service of another sire, and now they would willingly give six of their coats for his one. None of theirs is worth more than \$60, while for his he has been offered \$375. His enquiry is: Who made the best bargain?

EXPORTING FRUIT.

SIR,—As you are asking for information, perhaps you would like to know the result of my experience in shipping apples. On the 30th of October I shipped 400 barrels of apples, principally from my own orchard, consisting of Spitzenburgs, Rhode Island Greenings, Northern Spies, Snow Apples, and various kinds of Russets. I shipped to Gilbee & Co., Liverpool. I here give an extract from their letter:

"Your apples are received, and are the best we have ever received from Canada; in fact, some of them brought more than the choicest brands from the United States. The prices ranged from 20 to 25 shillings sterling, per barrel."

Metcal, Jan. 1st, 1873. ROBT BENTLEY.

A FAIR TEST.

SIR,—If all agriculturists, no matter whether tyroes or not, would report the result of the different varieties they have tested, we would constantly be in possession of information sufficient to guide us in the selection of the most profitable cereals for seed.

The best varieties cannot be too highly commended, neither can the poor varieties be too strongly condemned, from the fact that the farmer's dividends are vastly affected thereby.

To carry out practically the suggestion just stated, I give what I call a fair test of three varieties which I sowed last spring. I purchased one bushel of the McCarling wheat and one of the April. These were sown on the same day, in the same field, side by side, and the remainder of the field was sown with what I purchased for the Golden Drop, but which I think is Club wheat. The McCarling variety yielded about sixteen, the April eight, and the Golden Drop twenty-five bushels per acre. The McCarling, though not answering my expectations, I think is a good variety; it has a large plump grain, and stands up well. I intend to try it again.

The April Wheat, I must say, notwithstanding its flattering advertisement (see April No. of Advocate for 1872, page 64) is the worst wheat I have ever seen; it will laid down flat and was badly rusted; it has a long, hollow grain. The sample sent me for seed resembled drawings more than anything else. There is not one commendable quality in it. Such importations of seed from Great Britain or any other place are not, in my opinion, well calculated to promote the interests of Canadian farmers.

The Golden Drop or Club will, I think, when the weevil lets it alone, equal any of the new varieties. P. D.

Cannington, Jan. 6th, 1873.

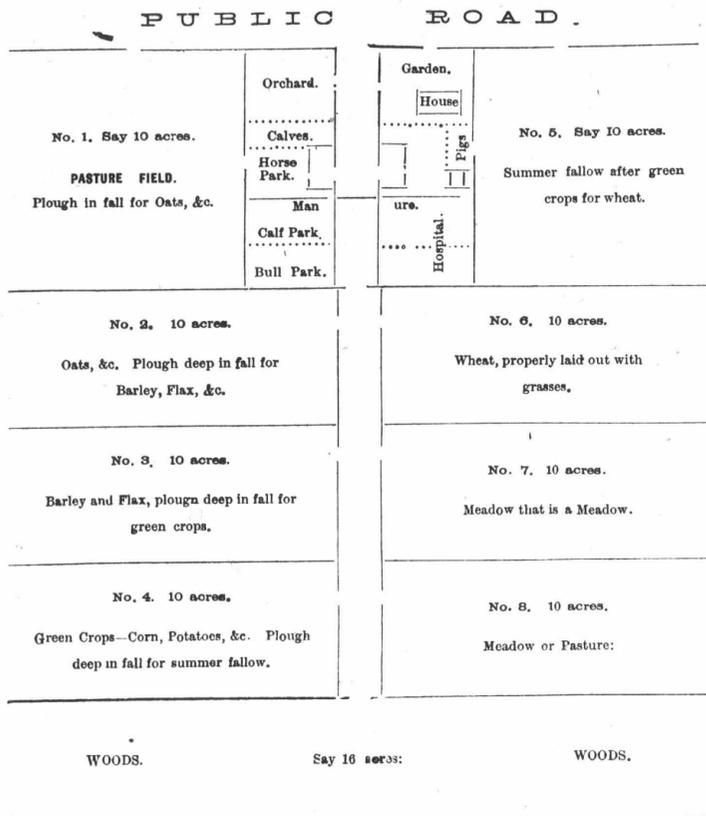
[As we have the writer's name, we publish the above. We do not hold ourselves accountable for advertisements that may appear in this paper. The April Wheat we have not advertised in our Seed List.—Ed.]

FIRST PRIZE ESSAY ON TURNIPS.

I here offer my plan on turnip culture. Take out stubble ground, plough after harvest crosswise of the lands, let it lie about two weeks to allow any small grass or seeds to sprout then harrow well lie three weeks longer, then apply a coat of well rotted manure, ridge it up in ridges about thirty-six inches in width in the direction best calculated to carry off the water, the ridges to be as high as can be thrown, for the following reasons:—The manure being in the ridge prevents its juices from being curled away by the water; the frost will better pulverize the earth: the surface water will be taken off leaving the ground dry and loamy instead of being water soaked, as is the case when ploughed in lands; the manure will be dissolved and retained in the ridge, and the ground will be dry in the spring, instead of being wet and sodden. After seeding in the spring harrow the ground crosswise of the ridges; plough in the same direction as harrowing; then harrow again and the land will be fine and loamy, owing to its being dry and the pulverizing action of the frost; apply a light coat of short manure; then ridge up about thirty inches in width; sow one and a half pounds of seed to the acre, between the 12th and 18th of June. The turnip will soon throw its fibrous roots into the manure in the centre of the ridge; then good bye to the flies. A little land plaster may be applied to the turnips if chosen or not, but it will put the plant forward to escape the flies. Hoe and cull as soon as it will not injure the turnip. Do not let the turnips or weeds (especially the latter) get a start; single them to about 12 inches, according to the situation and nature of the soil; keep the weeds down before the turnips covers the row. Commence taking them in about the 25th Oct., according to the quality of the ground and the force employed. Leave all machines in the lane, hang your coat on the fence and go to work with a will, pulling off top tail and putting four rows into one, and you will be better satisfied after than in leaving the roots on to carry a large quantity of dirt into the cellar, causing the turnips to heat and rot, besides the filthy state they are in when cut for the cattle.

These suggestions I respectfully offer!

E. JOHN SAVAGE, Gornley, P.O.



SECOND PRIZE ESSAY ON THE CULTIVATION OF TURNIPS.

DEAR SIR—I farmed at home, dear old Ulster, on the seven year shift. Ploughed pasture in the fall sowed with oats in the spring, then ploughed as deep as possible in the fall for flax. The next year again deep fall ploughing for green crops turnips, mangold, potatoes, barley, &c. This was a beautiful bed for fall wheat, but too late for this country. I always laid down my ground with proper grasses after the green crop, then you may expect a meadow, 5th year, 6th year meadow or pasture, 7th year meadow ploughed in the fall, and so on. Let any farmer that wants peace of mind, wants to do justice to his farm, wants to make money, wants a beautiful farm, get his farm into eight fields in this country, as a person cannot get off his green crops, potatoes, &c. in time. I would plough in the fall after my green crops, &c. were off. See the beautiful manured and clean field you have to follow the next year for your fall wheat, clear of weeds, well manured and pulverized—this is the bed for wheat. Say 100 acres in eight 10 acre fields—No. 1, pasture, plough in the fall. (See diagram) No. 2, field, oats; No. 3, flax or barley; No. 4, grain crops, corn, &c.; No. 5, summer fallow; No. 6, wheat properly laid down; No. 7, meadow; No. 8, meadow or pasture. Each field during every eight years goes through all these crops, and so does the whole farm. A man sees what he is at; he may fairly expect a good honest return from all his fields, and he can tell what crop will be, or should be, in any one of his fields for any number of years in the future. The first thing on a farm is a proper manure pit, so that all the run from all the houses is caught and kept. Then in the slack time, when the crop is all in, fill this place with muck of all kinds, pairings of drain, &c., all good manure for next year; without manure no farming. The great point in farming is the largest return with the smallest expense and labor, without exhausting the farm. This must be the grand aim of all wise men.

For turnips I would take a poor, exhausted stubble field, if a field of this kind be on the farm, surely it wants friendly hands, and I always found the nicest turnips, with only one root or feeder, no forks. If the land be poor, the manure right in the drill under the turnip, it sends down one long feeder to the manure, it has no inducement to send out feeders all around, consequently you have a beautiful, clear turnip, with only one root. The field intended for turnips I plough deep in the fall, hint the furrows properly, lease the field that

no water will lodge on it in the spring. After the grain crop is in, harrow and cross plough deep, then harrow right after the cross ploughing, and if the sun be strong for three or four days harrow again. The first harrowing pulverizes the ground and leaves the weeds on the surface for the sun to get his strength at; the second harrowing pulverizes and carries off nearly all the dry weeds, then plough as you intend to have your drills, harrow properly as before, then your drill plough with two mould boards, or you can fix up an old plough with wooden mould boards, will do. If you intend to manure highly the wider your drills are apart the better, but from 28 to 33 inches I found good crops. I open my drills that I can get the manure into and scattered, from say 3 o'clock p. m. to 9 o'clock a. m. the next day, then close your drills before the strong sun gets at the fresh moist manure. Let as little sun as possible at the manure, pass your waggon along, wheels in the open drills, scatter over three drills. My plan of planting is in holes, it saves seed and you are sure to have a plant where you want it, and the flies have not half the power on plants in bunches as when scattered along in the drill, and one sixth of the seed does. Get a large wheel with movable markers; wheel this along on the top of the drill; it leaves its small mark at say nine, ten, and eleven, but I would recommend nine, inches apart in this country, then a good smart boy runs along and drops from four to six grain in each hole. Pass a good heavy roller over the drills; this covers all and presses down the drills. The whole field is level now, and holds the moisture for the plants. When the crop is fit for thinning pass the cultivator between the drills. After a day or so pass along, select your plant in the bunch, pass your left hand on it between it and the others, with one sweep of the right hand you remove all the unfortunates! This can be done nearly as fast as a person can walk, then in a few days when the plants get well on their feet, pass along with the hoe and top the little riband between the plants. After this use your cultivator or plough as often as you can through the drills, and lastly, pass your drill plough through the drills, raise the mould so as to be somewhat higher than where the plant enters the ground, this keeps the plant nice and moist, and carries off all the surface water. At the time of lifting pass along with a good sharp hoe, nip off the top with one little blow, and toss in the turnip every two drills together. A good smart person will do as much as four persons will do at hand pulling, and its is much safer, for the

turnip never gets the hard toss from the hoe it receives from the hands of one of our tall, powerful six feet four Cannucks.

Your obedient servant,
EDWARD MCCOLLUM.
Daunt, Jan. 3, 1873.

SOILING.

SIR.—I sowed one acre of American corn in drills, and fed fifteen cows from the proceeds for two months, feeding sometimes once, but generally twice a day; also two horses twice a day. I believe this to be the most profitable acre I have ever sown.

JOHN CORBEN.
Burgessville, Jan., 1873.

NORTH WATERLOO FARMERS' CLUB.

A public meeting was held at St. Jacobs, on the 1st inst., for the purpose of organizing a Farmers' Club for the North Riding of Waterloo.

The chairman explained the object of the meeting, after which it was resolved—that it is highly desirable that a Farmers' Club for the North Riding of Waterloo be organized for the discussion of questions pertaining to agriculture, and for the mental improvement of farmers generally, with a branch Club for each Township within the Riding; and that the officers of the Clubs shall be a President and Secretary-Treasurer for the Riding Club, and a Vice President for each branch Club; the entrance fee to be fifty cents.

Mr. James Potter was appointed President and J. E. Bowman, M. P. P., Secretary and Treasurer for the Riding Club. Vice Presidents were appointed as follows: For Waterloo Township, Menno Bowman; Woolwich Township, H. W. Peterson; Wellesley Township, D. Pitch.

The first subject for discussion was "The Best and Cheapest Mode of Fattening Cattle." I hope by the assistance of your worthy paper that our Club will soon be in good working order, and second to none in the Province."
J. T. WILFORD.
Waterloo, Jan. 1st, 1873.

Uncle Tom's Column.

My Dear Nieces and Nephews,—

I feel as proud as a barn with ever so many fancy lightning rods on it, or as a hen that has just laid a capital big egg; and, if you could see the HEAR of letters on my table from you all, you would know why this was thusly. Just look at the list below of nephews and nieces who have written to me during the last month; and such splendid letters—full of fun and full of love for their old uncle, and I thank for his puzzles. Letters from little nephews who are same and cannot play like other children, but who take delight in studying out the puzzles. Letters from sick nieces who have some of their wearisome hours amused by Uncle Tom's Column. Letters from healthy and hearty nephews and nieces who have fun over our column in the evenings, when father and mother and all the rest of them puzzle their brains and enjoy themselves with our games and catches. Here is a letter from one of my nieces:

Ottawa, Jan. 5th, 1873.
Dear Uncle Tom,—
I send you a lot of puzzles and some answers. Oh, what an awfully hard lot you gave us last time. I want to puzzle you a little now. They say at school that kiss is a noun. Can you tell me is it proper or common? We decline nouns at school; can you decline a kiss?
I am your loving niece,
BESSIE H.—

I must say I am caught this time. However if I was in Ottawa, I might persuade Bessie that it was quite proper. I know that if it is very common I don't want anything to do with it. As to declining it—well, I ought to be able to do so, being a married man, but I very much doubt my ability.

Some of the answers to the puzzles are capital, even when not the same as required. For instance, several say, "I and R are the hottest letters, because they are in the middle of fire." Others say, "B and F, because B makes urn burn, and F makes fire fire."

Where you give as good answers as these, I count them right.

Some of the answers to the question: "Why is a widower like a house out of repair?" were very good. One said, "Because both have seen better days," and another, "Because both need a joiner."

A great many went astray on the shoemaker question, some even going so far as to declare that the shoemaker lost 40 shillings and the pair of boots.

About the acrobats—I have won, having had a majority of 21 in favor of ten acrobats.

I have received a grand lot of new puzzles, many of which will appear in future numbers of the ADVOCATE.

After the pleasant time we have had together this month, I think I may close this letter to you by saying, "For you are mine, and I am thine, and we are both EACH'S."
UNCLE TOM.

ANSWERS TO PUZZLES IN JAN. NO

1. I love but one and that is thee; Read up and down and you will see That I'll have you if you'll have me.
2. London on the Thames.
3. L I N K 4. P E A S
I D E A E A S E
N E R I A S I A
K A I L S E A L

5. January.
6. Too cross you are, too cross you be, I see you are too cross for me.
7. A cat caught a rat. (a c a t c o u g h t a r a t.)
8. When you put your stocking on.
9. Place three grains touching one another and place the fourth on top of them.
10. Because they both need repairing.
11. K N (Cayenne.)
12. Four shillings and the pair of boots.
13. Lyons. 14. Thebes. 15. Damascus. 16. Dover. 17. Constantinople. 18. Venice, Nice, Jerusalem, Salem.

NEW PUZZLES.

19. A man had a forty pound weight which was accidentally broken in four pieces. On examination of the pieces he was quite pleased, for he could weigh anything with them from one to forty pounds. What was the weight of each piece? ELIZABETH ROBERTSON.
20. SINGLE ACROSTIC.
The initials name a city. 1. An eastern plant. 2. A veg. table. 3. A kind of grain. 4. One of the United States. 5. A planet. 6. A story. 7. A Canadian city.
MARTHA JOHNSON.

21. Elz. zu. pysa eyre. vasis. iht.
R. REVELL.
22. A lady going to her flour barrel exclaimed: "O I C U R I M T Y." What did she mean?
ELLEN V. MCGANNON.

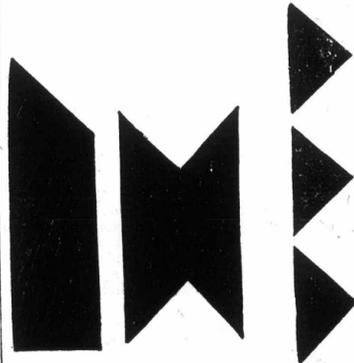
HIDDEN CITIES.

23. He delights to destroy our reputation.
24. Before the seer of Patmos cowards shrink with awe.
25. Ye sons of liberty rejoice in freedom.
26. You cannot hold that baby long.
K.

B e D

28. Thousands of beings are waiting for me, But their waiting is all in vain; Centuries pass, yet come I never, And those who wait for me wait for ever.
W. A. FURLONG.

Cut out pieces of cardboard of these shapes, and put them together so as to make a perfect cross:—



THE PRIZES.

Three of my correspondents have answered all the puzzles in January No. correctly. As there was only one prize promised, I was in a

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17; Bella F
vote); Sam
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ston, 15; J
R. Hornor,
Insbey, 15
Margaret Y
Newton Ro
13; Helena
Nelson, Ot
12; Jacob
Robertson,
Zurich, 12
Emeline W
Clure, Me
Wherry, N
10; Marti
McGannon
froy, 10; J
Hammond,
ford, Mill
burg, 9;
John H. J
ger, S. Cay
9; William
C. Greer, C
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Winder, B
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Albert St
Lancaster,
Martha R
Eastwood,
Duart, 1;
James Mc

The follo
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bad fix; however, I induced our liberal publisher to grant me two more prizes for those deserving them. So these are the winners of prizes for correct answers:

JAMES LINTON, Humber, ANNIE TAYLOR, London, MOSES PIERCE, jr., Brinsley. The prizes for New Puzzles, &c., are 1st prize, THOMAS R. HORNOR, Princeton. 2nd prize, MARY C. DURHAM, Homer. I should have liked very much to have had more prizes to give for puzzles, as there were a great many who really deserved them. They sent excellent collections, but the prize winners sent a little better and carried off the palm. All these prizes have been sent out to the winners, who, I hope, will write and let me know if they are satisfactory. To those who did not win this time, I say persevere; you have almost all done well, and next time you may win. I hope very soon to offer another lot of prizes; so be getting ready. If you see or hear a good puzzle, make a note of it immediately.

The following list gives the name of each person who sent answers to January puzzles. The number after the name of Post Office shows how many he or she answered correctly: James Linton, Humber, 18; Annie Taylor, London, 18; Moses Pierce, jr., Brinsley, 18; F. A. Campbell, Petersville, 17; S. Sudaly, Fenelon Falls, 17; W. A. Furlong, Nottawa, 17; Bella Finch, Kilsyth, 16 (thanks for big vote); Samuel Campbell, London, 16; Rebecca Revell, Ingersoll, 16; M. Newmarket, Kingston, 15; Janet Smith, Maple Lodge, 15; T. R. Hornor, Princeton, 15; M. J. Mc., Col-linsby, 15; Hugh Wiffier, N. Dumfries, 14; Margaret Young, Unionville, 14; Cassie Ney, Newton Robinson, 13; H. C. Brown, Berlin, 13; Helena Thornleigh, Berlin, 13; Thomas A. Nelson, Ottawa, 12; J. A. Potter jr., Berlin, 12; Jacob M. Sherk, Sherkston, 12; Elizabeth Robertson, Shanty Bay, 12; New Subscriber, Zurich, 12; Martha Johnson, Lamaroux, 12; Emeline Wilkin, Newmarket, 11; Andrew McClure, Mount Pleasant, 11; Elizabeth A. Wherry, Newry, 10; Francis Nelson, Ottawa, 10; Martin Terryberry, Oneida, 10; Nellie V. McGannon, Prescott, 10; E. A. Denure, Defroy, 10; J. T. Handley, Reading, 10; Sam'l Hammond, Hammond, 10; Willie A. Rutherford, Millbank, 10; Arthur Markley, Morrisburg, 9; Lizzie M. Malcolm, Markham, 9; John H. Heal, Roseneath, 9; H. T. Honsberger, S. Cayuga, 9; E. B. Howard, Kirkwall, 9; William Dickie, Nissouri West, 8; Samuel C. Greer, Gorrie, 8; John S. Baxter, Queenston, 8; Edwin Pickering, Ellesmere, 5; Thos. Winder, Brownville, 5; G. S. Williams, Oakland, 4; John L. Smith, Colfield, P. of Q., 3; Albert Still, Charlotteville, 2; John Bunn, Lancaster, 2; John Grout, Forrester's Falls, 2; Martha F. Crofts, Dawn Mills, 2; Robert Eastwood, Mimico, 1; Edward P. McCollum, Duart, 1; R. J. Cunningham, Buttonville, 1; James McElroy, Concord, 1.

The following list gives the name of each correspondent who has sent in a collection of new puzzles. Each name is numbered in its order of merit. 1, Thomas R. Hornor, Princeton; 2, Mary C. Durham, Homer; 3, Jacob M. Sherk, Sherkston; 4, J. T. Handley, Reading; 5, John S. Baxter, Queenston; 6, Bella Finch, Kilsyth; 7, Rebecca Revell, Ingersoll; 8, M. J. Newmarket; 9, Martha A. McKay, Aurora; 10, Sidney Potter, Hastings; 11, Elizabeth Robertson, Shanty Bay; 12, H. C. Brown, Berlin; 13, Elsie Craig, Milliken; 14, M. J. Mc., Collinsby; 15, Emeline Wilkin, Newmarket; 16, S. Sudaly, Fenelon Falls; 17, Nellie V. McGannon, Prescott; 18, J. Lawson, Battersea; 19, Robert Armstrong, Hornby; 20, Levi and Frank Barkey, Arkona; 21, K., London; 22, New Subscriber, Zurich; 23, W. A. Furlong, Nottawa; 24, E. B. Howard, Kirkwood; 25, Martha Johnson, Lamaroux; 26, John H. Heal, Roseneath; 27, Willie A. Rutherford, Millbank; 28, Martin Terryberry, Oneida; 29, E. P. McCollum, Duart; 30, Elizabeth A. Wherry, Newry; 31, Cassie Ney, Newton Robinson; 32, Edwin Pickering, Ellesmere; 33, John Bunn, Lancaster; 34, Arthur Markley, Morrisburg; 35, John L. Smith, Colfield, P. of Q.; 36, A. Denure, Lefroy; 37, James McElroy, Concord; 38, Emma McLeod, Parkhill; 39, Janet Smith, Maple Lodge; 40, Bessie H., Ottawa; 41, Thomas A. Nelson, Ottawa; 42, Robert Robertson, Shanty Bay; 43, William Stokes, Storrington; 44, Hiram Lee, Hamilton; 45, John Cooke, Galt. Andrew McClure, Mount Pleasant, came in late; he would stand about No. 13.

We see by an exchange paper that another horse disease has broken out in New York. Every case appears to have terminated fatally. It is said to be caused from working horses when laboring under the epizootic. By an error of the printer, some of the type dropped out of the Emporium Price List for January, and the first side of the paper was printed before the mistake was noticed. For correct prices refer to last issue.

Caution.

DEAR SIR—You will do well to warn all the readers of the ADVOCATE to beware of a scoundrel who is on his way up the country, selling receipts to make burning fluid, which he says is better and cheaper than coal oil, but it is false. He has swindled a great many simple folks in Quebec and Central Ontario, and now he is going west. He charges two dollars for the receipt, but it is utterly worthless. The following is the receipt to make one gallon:—Benzine, 3 quarts; chloride of lime, 1 oz.; alum, 1/2 oz.; camphor, 1/2 oz.; oil of cinnamon, 2 drs.; salt, 4 oz.; potatoes, 1 pint, grated; mix all and let it stand 24 hours. Now, sir, he said the benzine only cost 20 cents a gallon in Ottawa, but a neighbor went there and found it cost one dollar a gallon, and the druggist said it was very explosive, and therefore dangerous to meddle with.

Yours truly, GOULBURN.

Yorkshire Cattle Feeder.

Will you inform me if the Yorkshire Cattle Feeder is worth purchasing for fattening stock? H. SMITH, Gorrie.

It is not much used in this country, or is any other artificial cattle feeder. A few of the best farmers here have tried a little of it lately. It is well liked by those that have tried it. When in Toronto lately we called on Mr. Miller, the proprietor of the Feeder, and he kindly showed me his shipping book. He ships immense quantities of it to Guelph. That speaks as highly for it as anything we can say. The Guelph farmers have their name up for good beef cattle. Mr. S. Beattie was in Toronto on the same day we were there, he took 100 pounds of it home with him. We ordered a supply, feeling satisfied from the conversation we had with farmers while there that it is a first-class feeder.

"That policeman has a fine pair of tights over there, hasn't he?" "How so?" "Why, don't you see those two tight fellows that he's taking to the station-house?"

BREAKFAST.—EPPE'S COCOA.—GRATEFUL AND COMFORTING.—By a thorough knowledge of the natural laws, which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well selected cocoa, Mr. Epp has provided our breakfast tables with a delicately flavored beverage which will save us many heavy doctor's bills. Civil Service Gazette. Made simply with Boiling Water or Milk. Each packet is labeled—"James Epps & Co., Homoeopathic Chemists, London." Also, makers of Epps's Milky Cocoa (Cocoa and Condensed Milk). 73-1-7

The FARMER'S ADVOCATE, edited in London Ont., D. C. Terms, 1 per annum, in advance; \$1.25, if in arrears; postage prepaid. Advertisements 10c. per line, agate space. Communications and advertisements should be in the office by the 15th of the month to ensure insertion in the following number. Postage and all other expenses charged on collection of accounts, if in arrears.

London Market—Jan. 26. White Fall Wheat, per bush. \$1 20 to 1 30 Red Winter Wheat..... 1 15 to 1 20 Barley..... 58 to 65 Peas..... 52 to 58 Oats..... 36 to 36 1/2

Great Western Railway. Trains leave London as follows:— GOING WEST.—12.5 p. m.; 5.35 p. m.; 2.45 a. m.; and 5.45 a. m., and 6.45 a. m. GOING EAST.—6 a. m.; 8.4 a. m.; 12.35 p. m.; 4.4 p. m.; 11.3 p. m.; and 1.15 a. m.

Grand Trunk Railway. Mail Train for Toronto, &c., 7.3 a. m.; Day Express for Sarnia, Detroit and Toronto, 11.1 a. m.; For Stratford and Goderich, 2.55 p. m.

HEIKES TRIUMPHS

Over the Seasons. He offers from his extensive cellars a general assortment of Trees, Plants, Vines and Seedlings, IN LARGE QUANTITIES and in fine condition. Goods will be carefully packed, and can be shipped at any time. Address W. F. HEIKES, Dayton, Ohio.

OCEAN PASSAGE.—Persons intending to take a trip to the Old Country, will find it to their advantage to go by the Steamers of the National Line—large, safe and comfortable vessels. Fare low. Apply to F. S. CLARKE, next door to the Advertiser Office, London.



PUBLIC NOTICE.

DEPARTMENT OF AGRICULTURE, Ottawa, 11th October, 1872.

VIENNA EXHIBITION.

In pursuance of an Order in Council, dated 2nd October, 1872, notice is hereby given to Companies, Firms or Individuals who may desire to send on their own account articles to the forthcoming Vienna Exhibition, of the following abstracts of rules furnished, and the offer of services tendered by the Committee of Her Majesty's Commission entrusted with the management of the Exhibition of Colonial Productions.

- The Vienna Exhibition programme refers to objects coming under a classification comprising twenty-six groups, viz.: Group 1. Mining, Quarrying, and Metallurgy. Group 2. Agriculture, Horticulture, and Forestry. Group 3. Chemical industry. Group 4. Substances of Food, as products of industry. Group 5. Textile Industry and Clothing. Group 6. Leather and India Rubber Industry. Group 7. Metal Industry. Group 8. Wood Industry. Group 9. Stone, Earthenware and Glass Industry. Group 10. Small Ware and Fancy Goods. Group 11. Paper Industry and Stationery. Group 12. Graphic Arts and Industrial Drawing. Group 13. Machinery and Means of Transport. Group 14. Philosophical and Surgical Instruments. Group 15. Musical Instruments. Group 16. The Art of War. Group 17. The Navy. Group 18. Civil Engineering, Public Works and Architecture. Group 19. The Private Dwelling House, its inner arrangement and decoration. Group 20. The Farm House, its arrangements, furniture and utensils. Group 21. National Domestic industry. Group 22. Exhibition showing the organization and influence of Museums of Fine Art, as applied to industry. Group 23. Art applied to Religion. Group 24. Objects of Fine Arts of the Past, exhibited by Amateurs and Owners of Collections (Exposition des Amateurs). Group 25. Fine Arts of the Present Time—Works produced since the Second London Exhibition of 1862. Group 26. Education, Teaching and Instruction.

To the Exhibition of articles coming under the above mentioned titles are added what is called ADDITIONAL EXHIBITIONS and TEMPORARY EXHIBITIONS, the former having reference to: 1. The History of Inventions. 2. The History of Industry. 3. Exhibition of Musical Instruments of Creations. 4. Exhibition of the use of waste materials and their products. 5. The History of Prices. 6. The representation of the Commerce and Trade of the World, and the latter having reference to: 1. Live animals (horses, cattle, sheep, pigs, dogs, fowls, game, fish, &c.) 2. Butchers' meat, venison, poultry, pork, &c. 3. Dairy produce. 4. Garden produce (fresh fruits, fresh vegetables, flowers, plants, &c.) 5. Living plants injurious to agriculture and forestry

The Managing Committee above mentioned of colonial productions is under the presidency of the Marquis of Ripon. The Secretary of Her Majesty's Commissioners for the Vienna Exhibition is Phillip Cunliffe Owen, Esq., who is to be addressed "Vienna Exhibition Office, 41, Parliament Street, London, S. W."

The following is an abstract of the rules as far as it may concern private individuals, i. e. a. Her Majesty's Commission is appointed to represent British and Colonial Exhibitors. b. Exhibitors will have to defray all expenses, including transport of goods. c. The Austrian Committee will communicate solely through Her Majesty's Commissioners. d. The Exhibition will open at Vienna on the 1st May, and close on the 31st October, 1873. e. Exhibitors are responsible for the packing, forwarding, receiving and unpacking of their goods, both for the opening and after the close of the Exhibition. f. The objects will be submitted to the judgment of an International Jury. g. The objects for Exhibition will be received at Vienna from the 1st February until the 15th day of April, 1873. h. The objects exhibited will be protected against piracy of invention or design.

1. Exhibitors and their Agents will receive tickets entitling them to free admission to the Exhibition. On account of the limited space of time remaining, intending exhibitors should lose no time in placing themselves in communication with Her Majesty's Commission Committee.

J. H. POPE, Minister of Agriculture. London, Jan., 1873. 231

Farmers, Look Here!

NOW IS THE TIME TO SAVE YOUR MONEY by sending for a Right of STROHM'S RACK & GRAIN LIFTER

IT RAISES THE WHOLE LOAD AT ONCE, and when elevated, it can be pitched off by hand, or thrown into the mow by a horse at one pull. It is the ONLY CHEAP and GENUINE Machine for the purpose yet invented. Any handy farmer can erect one in three days. Satisfaction guaranteed, or the money refunded. Address—MARTIN & BROTHERS, Oneida P. O., Ont. Agents wanted. Township, County and Far! Rights for sale. 31-2

FOR SALE.

"YOUNG OXFORD." RED ROAN; Calved May 12th, 1869 No. 549, Canada S. H. Stock Register. Got by "Blenheim Star," No. 80, Register. Has proved himself a sure stock getter. HUGH LOVE, sen., Hills Green P. O., Co. Huron. Wanted—Exchange for a T. B. Durham Bull calf. 2-11

Great Sale at A. Chisholm & Co's

WHOLE WINTER STOCK REDUCED. Now for BARGAINS AT THE STRIKING CLOCK London, Feb., 1873. 2

AUCTION SALE.

MR. JOHN KENNEDY OF HYDE PARK (four miles from the city of London) having rented his farm, will dispose of his THOROUGH-BRED STOCK on Tuesday, the 4th of February.

HORSES from "ANGLO SAXON," "PHENOMENON," "WARRIOR" and "FESTER"; 13 head of DURHAM CATTLE—COWS, BEEFERS, CALVES and BULLS; 40 Superior Sheep—LEICESTERS, COTSWOLDS and LINCOLNS; 11 choice Berkshire Hogs and Pigs; Grade Cattle, implements, &c. Pedigree furnished of Thorough Bred Stock. Terms:—Under \$10, Cash; over that sum 12 months' credit. 2-1 A. S. EMERY, Auctioneer.

FARM FOR SALE OR TO RENT.

Lot No. 6, west side of West St. 7 1/2 acres of land, 2 1/2 miles from the Market Square. Frame Cottage, 26 x 36, with good Cellar and Kitchen—16 x 18. 1 Frame Stable for six horses, Board Fence round the Lot; small Orchard on banks of river; very rich soil. Price, \$400; Lease for \$100 a year, tenant to keep fences in repair. Also, FIVE ACRES on Gravel Road, same distance from city. House with 4 rooms; stables; well fenced. Price \$1000. Apply at this Office, or to F. MAARS on the premises.

London Commercial College

AND Telegraphic Institute. THE OLDEST, CHEAPEST AND BEST COLLEGE in the Dominion. Young Men Fitted for a Business Life. No matter what may be your calling, take a course with us, and you are better fitted to pursue it. No class of men are more imposed upon by lawyers and others than farmers; but if they take a course at our College it will enable them to do their own business, and thus save hundreds of dollars yearly.

Send for Circular to JONES & CO., London, Ont. 2-5

STALLION FOR SALE—Dark Bay, 3 yrs. old, 17 hands high, girt 67 inches; good action. Sired by Anglo Saxon; Dam sired by Messenger. Apply at this office.

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Weekly, \$3.

TUNE

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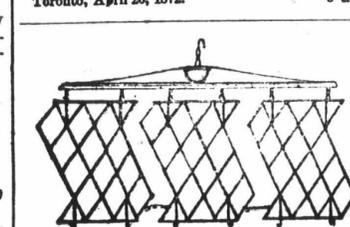
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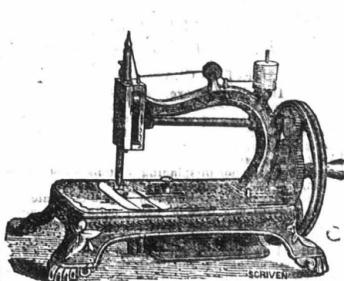
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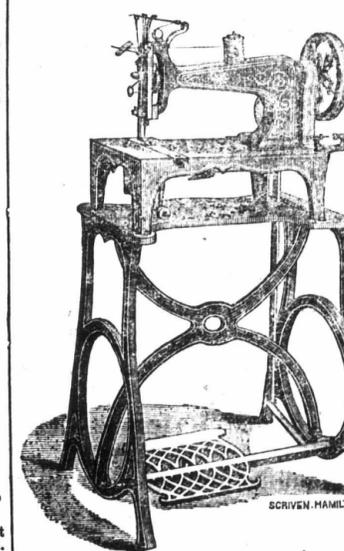
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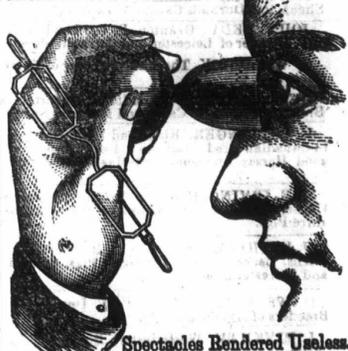
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