

ROSE,
Seedsman.

ED: all KINDS of
MANGEL, &c. &c.
and of the very best

ROSE,
D SEEDSMEN,
r.

FACTORY.

Breeder of South-

72-1-y

Importer & Breeder
and Merino Sheep

P. O., Breeder o

72-1-y

P. O. Breeder of
Wold Sheep. 1-y

ia P. O., Breeder

72

Breeder of Cots-

Sheep.

P. Q. Importer and

Cotswold Sheep and

der of Short Horns,

outhdown and Lei-

ly

er of Short Horns

ly

of Ayrshire cattle,

breeder of Berk-

12

breeder of Essex,

and Cotswold Sheep,

11-y

ville, importer and

Berkshire swine,

12

and breeder of Cots-

12

or and Breeder of

Leicester Sheep,

P. O.

12

P. O. importer and

Clydesdale Horses,

11-y

Manville, Importer

Devon Cattle

11-y.

Breeder of Leices-

11-y

Farm, Montreal.

Clydesdale Horses,

and Leicester Sheep.

11-y.

E. Bellville, Breed-

shire Cattle. 11-y

of Galloway Cattle.

11-y.

r and Importer of

Southdown and

Berkshire Pigs.

Ontario

11-y

Brougham P. O.,

old Sheep, improved

Horses. 11-y.

Breeder of Leicester

11-y

Breeder of Ayrshire

11-y.

Edmonton, Breeders

ster and Cotswold

ire Pigs. Winner of

the best Bull and fire

exhibition, Kingston,

11-ff.

ue Guelph, Importer

and Hereford Cattle,

cep, and Berkshire

11-ff.

MOHR, Galt P. O.,

icester Sheep and

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coln and Leicester

Puslinch, Township,

71-11

an, Hyde Park P. O.,

Leicester Sheep and

11-ff.

Importer and Breeder

ex Swine. 11-71

eeuer of Short Horn

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ead, breeder of pure

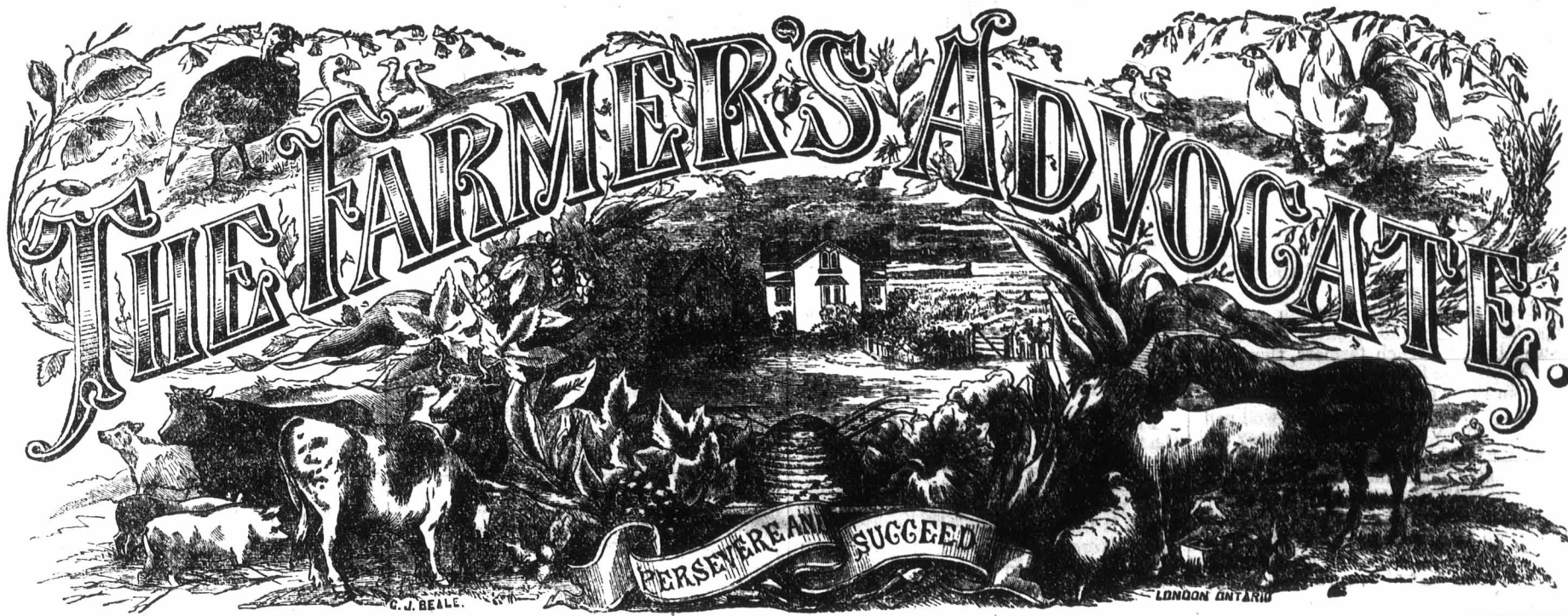
and, Breeder of Short

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arns, Oshawa, Breeder

72-3-y



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WILLIAM WELD,
Editor and Proprietor

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Crops.

Having personally gone over a greater extent of our country this year than in any previous season, with the desire of ascertaining more about the state of the stock and crops, we think, on the whole, we shall have to record the crops in general as below the average. In some parts the hay and spring crops are good, but in many other places we find them inferior.

It really is surprising to us to find such a very great difference in various parts of the country; in some places the dry weather has done much damage, and in others showers have been more abundant. The fall wheat is far below the average, winter-killing and rust being the cause. Spring wheat looked much more promising in the Province of Quebec than in our Western section. Much of the spring wheat in this county is badly rusted, and the Hessian fly appears to be doing rather more harm than usual.

Barley will be light but of good colour. Oats, medium crop, but below the average. Peas, light crop. Potatoes will be plentiful, the bugs having been pretty well kept under, although we have seen some places where they have done considerable damage. Those farmers that have allowed them to breed and increase have done a great injury to the country, as they have raised stock enough to destroy the crops of many townships. We think a compulsory Act, either to enforce the destruction of the bugs, or the ploughing under of the potatoes, would have been of very great advantage to the country. There is a pretty good apple crop in Western Canada, but only a small crop in the east. The apples are badly effected by insects and are more spotted than usual. Turnips, carrots and mangolds will be light. We speak from general observation; as far as our judgment is concerned, there are some exceptions and in some places different accounts might be given. But want of space prevents quotations from each section.

Seed Wheat.

The time has again arrived when we are called on for remarks about this important question. We have examined more closely than usual into the state of the growing crops; the Deihl wheat appears to have been sown to a greater extent than any other, but this season has most effectually stamped it out of future cultivation to such a great extent. We previously stated our objections to this variety; that it is tender and will not stand the winter as well as some other varieties. It has rusted badly this year, and every farmer knows that it will, in a wet season, grow in the head quicker than any other variety. There are some good pieces, but the

large number of inferior pieces will cause many to seek for other varieties of a hardier nature.

The Soule wheat has also rusted this year. The Treadwell variety has not rusted half as badly as either the Deihl or Soule wheat. We believe all that have had the Treadwell variety this year are well satisfied. We have not heard much about the Arnold or Forfar wheats this season, but hope to hear of them ere another paper is issued. The Weeks wheat has also stood the winter well, and will out yield the Deihl or Soule wheat. It is a bearded white wheat. We have sown it three years. It is deserving of more extensive cultivation.

THE COMING WHEAT.

Last year we introduced a little of the Scott wheat. From every report we have heard and from our own observations, having seen it growing by the side of other varieties, we give it the preference. We consider it the safest and most profitable wheat to sow. It has stood the winter well, has a good stiff straw, is a bold white-chaffed red wheat, and will out-yield, on an average, any other variety of wheat we know of at the present time. In the next issue of this paper we hope to be able to give the results of several pieces from different parts of the country, and we feel convinced that it is the wheat that will be in demand. Should any of you not condescend with these observations, say so. We hope you will correct us if we should at any time be in error, and we also hope you will send us reports of the yields of the different varieties in your sections. We shall be glad to receive samples of the Scott wheat, with price stated and what quantity can be spared. In the next issue we shall be able to state what prices it may be obtained for either by the bushel or car load.

A Trip to Idaho.

Mr. Thos. Friendship, of London township, one of our Middlesex breeders of Canadian stock, has just returned from a trip to Blacktail, Deerereek, Idaho. He left London May 2nd, travelling by rail to Chicago, across the Mississippi River to Council Bluffs, 1,500 miles through Nebraska west of the Rocky Mountains, then 500 miles by road. He took with him 14 head of cattle, 4 bulls, 4 heifers and 2 calves. Several of the bulls took prizes at our Western Fair last fall, and 3 of them were the progeny of that celebrated cow "Sally," which he bought from us. He was 26 days travelling the 500 miles; he bought a span of mules and waggon, hired a man for the trip at \$40 and expenses, so that they could take turns, one walking while the other rode, and one sleeping while the other watched. The

rivers and creeks in many places were much swollen, caused by the snow melting on the mountains.

On coming to water all the cattle were treated to a swim; on one occasion a bull took it into his head to swim across, and Mr. F. had no alternative but to follow him. So he stripped and took the water, which was nearly a quarter of a mile wide. In the meantime the bull had travelled inland quite half a mile, Mr. F. following, clad in nothing but his birth-day suit. On reaching him another little difficulty occurred; Mr. Bull refused to acknowledge his master, in fact was terrified at his appearance. However, after a chase of a mile or so he managed to get him back.

The cost of this journey was \$1100 there, and \$175 back, besides having to pay \$1 for each meal and bed until he reached Chicago on his return. Still he expresses himself well satisfied with his trip and with the cash realized. He reports the country there as splendid, and considers that we are at the tail end of the world.

The Victor Tomato.

We have now in our office some ripe specimens of this really splendid tomato, of which we gave a notice in our March number. They are large, smooth skinned, very fleshy and sweet—altogether a very superior class. Although, owing to the six weeks protracted dry weather, these are not above half the usual size attained. The seed was sown in a hot bed on the 8th of April and the plants set in the open field on the 10th of June. The first ripe fruit gathered on July 18. Not bad for Canada.

Agricultural Exhibitions.

The three principal exhibitions to be held in this Dominion will be the Provincial, in Hamilton, from the 24th to the 27th of September; at Guelph, the Central Exhibition, from the 1st to the 4th of October; the Western Fair in London from the 8th to the 11th of October. Very handsome prizes will be awarded at each of these exhibitions. We hope many of our Eastern breeders and manufacturers will attend, as the dates are well arranged this year; an exhibitor can easily attend at each place. We are fully convinced that each exhibition will be a credit and honor to our country. Come and see them.

FRESH BULLS.—In our advertising columns may be seen Anthony Rozen & Sons' advertisement. We have procured bulls from their establishment in Holland, and for cheapness and quality they have proved satisfactory to us. We know of no better source for procuring really choice bulls, &c.

On June 15th we received a letter, postmark, Alma, and registered, but no signature. The writer will oblige by communicating with us.

A Trip to Montreal.

With the double purpose of enjoying a little relaxation and attending to business, we took the train for the east. We farmers of the west are apt to look on the eastern counties too disparagingly; we are apt to think that the inhabitants are all French, and a very poor class of people; that the soil is rocky and sterile, and that farming in the true sense of the term is there quite unknown.

But the fact is, that although a large proportion of the land is only "scratched about" by the French farmers, there are many really fine farms having as good soil as any in the west. Some of them are farmed by Europeans and are well conducted. Many have amassed money and property as fast as any in our western section. Their climate may be a little colder than ours, but vegetation is quite as forward in the spring as it is here. People can and do live as happily there as in the west. Near the city, and as far as one hundred miles east of it, we have travelled through sections that would compare favorably with Western Canada, and we have reason to believe that farmers in some parts of the east are better off than many in the west. They have herds of pure bred cattle, not inferior to any in the western province, and they have the finest blood horses.

On Mr. Sheddon's farm, ten miles from Montreal, is the celebrated horse "Thunder," which we consider, taking all things into consideration, the best and most valuable blood horse we have seen in Canada. Many of the blood horses have a name and nothing more, but this one is so handsome and well proportioned that he looks as if he was of a class greatly superior to such wretched looking animals as are usually found under the name of blood horses. A lot of very valuable Ayrshire cattle, Clydesdale and other mares are also kept on this farm.

Mr. Daws, of Lachine, has the best Clydesdale stallion in Canada. Mr. Allen has such a herd of Alderneys on his farm as no one in Ontario can equal. He has also a blood stallion that cost \$4000. We have not seen spring wheat or root crops this year in the west to surpass what we have seen in the east. Mr. Cochran's Durhams and Ayrshires, and Messrs. Whitney and Irving's Ayrshires belong also to the lower province.

Mr. Henderson, the tenant that occupies the Molson Farm, has this year planted 70 acres of potatoes. Last season large quantities of potatoes were shipped from this place to western Canada, as far west as to Toronto. What are our western men doing to have the east supply them? We do not think any western farmers have hogs or poultry superior to those we have seen in the east.

When we compare the prices of land, the cost of labor, and the great conveniences of the eastern province with the western, we sometimes think that many would do better in the east. The daily laborer would, no doubt, do better by going west, but many of the emigrants that come into the country with money and engage in farming, would often be more successful here than in settling in the backwoods or on the prairie.

A RUINOUS EXPORT.

It is of undoubted advantage to reside near a good market, especially if people understand farming in all its bearings. But circumstances sometimes alter cases; the French Canadians cannot be called the best farmers.

We have travelled over fine tracts of land that were once covered with valuable timber, but now firewood and fencing are not procurable except at enormous expense and long journeys. Coal has now to be purchased by some French Canadian farmers. The land for many years after being cleared produced excellent crops of wheat. It was compelled to yield its riches until from exhaustion its wheat-producing powers had been so reduced that it had to be abandoned.

Many of the farmers are taking advantage of its hay-producing powers, and are yearly cutting smaller and smaller crops of hay, which instead of being kept to feed stock is sold to American dealers.—We hear that one dealer alone kept sixteen hay-presses in operation in Canada during the last season, and the quantity sent to the States must have been enormous. Some consider that the injurious consequences of this system should be in some way checked by an export duty or prohibition act.

NO PROVINCIAL EXHIBITION IN QUEBEC.

From a conversation with Mr. Le Clerc, the Secretary of the Provincial Board of Agriculture of Quebec, we learn that no agricultural exhibition is to be held there this year. The reason given for this course is that they desire to foster their funds to erect permanent and substantial buildings for the future use of the Association. It is certainly true that better buildings are needed. The exertions put forward in Guelph last season were such as to cause the erection of better buildings for stock, &c., than are to be found in Quebec.

We may appreciate their desire to erect these buildings, but at the same time we do not think it a judicious or wise policy to abandon the exhibition even for one year. It speaks but a sorry tale for the Quebecites. There is one feature that may palliate this course: the labor and making up of the exhibition there falls on but few, as the majority of French Canadian farmers take but little part in it. We know it is difficult to get some of our western farmers to take an interest in our exhibitions in the west, but they are rapidly improving in this respect.

AGRICULTURAL COLLEGES.

At the present time there are two Agricultural Colleges in existence in Lower Canada, which are maintained at Government expense. We understand that the lowest number of scholars must be ten, and it is with the greatest difficulty that the required number can be obtained to enter the establishment to enable the recipients to draw the Government pay.—We learn that the education is free to the scholars. We had not time to visit the institutions, but from what we have heard the accounts are even worse than from the Agricultural College or Test Farm that was established in Toronto.

Perhaps it would be well if some of our legislators were to make enquiries into the results of the Government expenditures for agricultural education that have been made in both eastern and western Canada, before laying an additional tax on the farmers for something that might be only an injury to them.

DEATH OF ANOTHER AGRICULTURAL PAPER.

Are agricultural papers of service to the country?

This is a question for farmers to answer. In a recent issue of this journal we gave notice of the decease of the *Ontario Farmer*. Now we have to record the chance of *Le Semain Agricola*, which was the principal agricultural paper published in the Province of Quebec since the cessation of the *Agriculturist*, which was published in that province. It is now no longer confined to agriculture but is a general newspaper. The *Globe* Printing Company are still publishing their paper, but at a loss. Our farmers are becoming supplied with American papers.

Does not this speak volumes in support of the subject on which we have so often treated, namely, the oppression that has been placed on agricultural publications? We do not cite the demise of these agricultural papers with pleasure: we would much rather see them flourishing. Does this report speak well of our country?

Where is the fault? what are the reasons? We doubt not that the proprietors have labored to maintain their papers and have expended money for such a purpose. If the existing papers are not as good as they should be let each farmer try to make them better, either by writing or by adding more subscribers names. Perhaps there may be some members of Parliament who may yet bring this subject before the notice of the Legislature.

MACEACHRAN'S VETERINARY INFIRMARY.

Mr. McEachran is one of our western men who has planted himself pretty snugly in the east. He has the best arranged horse infirmary we have seen in Canada. Horses of all kinds are continually being brought to be cured of one disease or another. He is doing a very large business, and has charge of Mr. Sheddon's stock of horses. Mr. Sheddon keeps about 180 horses in the city, and we know not how many on his farm. These alone give Mr. McEachran a great deal to do, as there are always some sick and some bought and sold continually. He also has the charge of several herds on farms around Montreal, that is, in the veterinary way.

The veterinary school is progressing favorably, and must afford an excellent opportunity to young men to learn the art. We are highly pleased to see Mr. McEachran prospering so well. He has now the leading establishment of the kind in Montreal. Perhaps our Forest City may yet have its veterinary infirmary and college.

AYRESHIRE CATTLE.

Eastern Canada is the great centre of the Ayrshire cattle on this continent.—Americans and Canadians look to it as the place from which to obtain their supplies. They are quite as much in vogue here as the Durhams in other places, and gentlemen of unlimited means purchase them in preference to the Short horns. They are considered much better adapted to the country and more profitable. The prices paid for these animals in the east would astonish most of our western farmers.—Mr. Whitney, a wealthy merchant of Montreal, has perhaps the finest herd of them in Canada. His farm is at Frelighsburg, a beautiful section of country about sixty miles from Montreal.

Messrs. Daws, of Lachine, are very wealthy; they have an extensive brewery and a farm of 700 acres. They have gained considerable celebrity by their Ayrshires. We saw on their estate two small calves for which they paid Mr. Whitney \$100 a piece.

Mr. A. Allan, of the Steamship Co., with almost unlimited wealth, is just now stocking his farm with Ayrshires and Alderneys, blood, Clydesdale, Shetland horses, &c., the best and purest bred that money can buy. He has expended \$300 per acre on a farm to prepare it for such stock. Money is not to be spared to make the farm a model of neatness and beauty, and stock it with first-class animals.

We might also mention Mr. Sheddon of the Grand Trunk, and Mr. Cochran, both gentlemen of wealth. To such men it would matter little, as regards the price, whether their purchases were Durhams or Ayrshires; but it is their conviction that Ayrshires are the stock for the country.

We are sorry that so few of our Western farmers have stock of this class; they are growing in favor, and we are of the opinion that for breeding for profit they are a better and safer investment at the present time than the Durhams. We do not wish to disparage the Durhams, as they stand at the head of all our stock, but the Ayrshires carry off the palm from them when we touch the milk-pail. There is more profit to be made in Canada by cheese and butter making than by beef.

The Elections.

During this month you will all have an opportunity of again recording your votes. Let not the hue and cry of party lead you astray! We have watched the plans and plots of party for many years, and from our observations we are led to the conviction that the main impulses are 1st, self, 2nd, friends, and 3rd, the country. There are undoubtedly some that look to the welfare of the country, but most of the candidates will look through their own spectacles.

There are many farmers fit to represent the country and look after the agricultural interest. All it requires is a plain, honest, common-sense man. Do not be led away from voting for a plain farmer because he is one of yourselves, or because he is not so ready at repartee or logic, or as fluent, or as full of statistics as some of the trained citizens that will be running through all parts of the country and acting so kindly and courteously to you for a few days. Do not think a plain farmer is not fit to represent you. By all means prefer to vote for a farmer similarly circumstanced to yourselves. Why borrow so many men from professions? The cities will send all the professional men necessary to watch and look after their interests, and why should you choose men of your own calling? Send more farmers; never mind about party; your party is agricultural interests. Do not deceive yourselves nor disgrace your calling by voting for men from other callings.—Nominate and vote for a farmer, or stay at home!

Send more farmers to Parliament; the interests of the country demand it, and your interests demand it. Our party is the farmers' party.

State of Crops—July 24th.

Having recently taken a journey through Peterboro, Victoria, Simcoe, and part of York, we noticed very few pieces of good fall wheat, most of it having been badly winter-killed. Several pieces have been ploughed under and re-sown with spring crops. Some small pieces are tolerably good where the woods have sheltered them, and even the protection of a fence shows a marked difference. The farmers are becoming alive to the necessity of planting trees for the protection of their crops. The fall wheat must be far below the average.

Early sown spring crops look well, but the later sown crops have suffered from the drouth. The hay crop is light; there appears to be no bottom or undergrowth, which we attribute to the killing out of much of the plant during the winter. Potatoes look remarkably well; the potato bug has not done much harm here. Turnips bid fair to be a good crop, although some pieces looked inferior.

Book Notices.

The School of Chemical Manures, or Elementary Principles in the Use of Fertilizing Agents, from the French of N. Georgeville, by A. A. Fresquat, chemist and engineer.

There is no study connected with the science of agriculture more beneficial than agricultural chemistry. The knowledge of the constituent elements of the soil, of what elements necessary to increase its fertility, what manures it needs—this knowledge is required to constitute a thoroughly good farmer. The title of this work, which we give in full, introduces the reader at once to the subject. It is written in the method of question and answer, and is a "school" preparatory to more elaborate works. The appendix is to us the most valuable part of the work; we hope to refer to it when we have more space.

The Model Potato, by John McLansan, M. D. We have barely space in this issue to acknowledge the receipt of this book. The subject is one that more specially demands the attention of men of science as

well as farm hints.

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well as farmers. It contains some valuable hints.

The "Hearthstone," a family paper, illustrated and got up in that superior style for which the publisher, Geo. Debarrats, is so well known.

Agriculture.

ALWAYS GET THE BEST.

The aim of every man and woman should be to get the very best of everything. But the question will often arise, "Which is the best?" and that which is best for one person or locality may not be best for another. Probably in no occupation does this question of buying the best so often come up for consideration as with the farmer. If it is a mowing machine that he wishes to purchase, the scores of different patterns offered him only confuse instead of aiding him to decide upon one, and if he asks for information of his neighbors the chances are that each will recommend a different machine, for there are many first-rate ones in the market, and even the best judges are not always competent to tell wherein a certain favorite is superior to another. There is, however, a great difference in mowing machines. Some require more power to run than others, while some are more durable, better made, and not so liable to get out of order, and all of these points should be and must be understood by the purchaser who desires to obtain the very best.

Then there are other things to be taken into account in buying an implement, such as the land upon which it is to be used, whether stony, light or heavy, level or hilly; for what is best for one would be the very poorest for the other. Steel plows or cast-iron, light, thin bores or heavy ones, all must depend upon the kind of soil in which they are to be used. A grub hoe is a good thing in its place, but not for hoeing corn where there is neither sods, grubs nor stone.

Where the soil is light and free from roots, or other obstacles to culture, light steel implements are the most economical, but in soils of an opposite character heavier implements must be employed. It is to these widely different conditions and circumstances that we must attribute the widely different opinions expressed in regard to the value of many of the really good implements in use, and the man who is unacquainted with any of them needs to take all this into consideration when he undertakes to get the best for himself. The most expensive implement may not be the best for you, but it might be for your neighbor.

The same principle holds good in all branches of agriculture and farm economy. The stock adapted to one locality might not be equally valuable to another, for experience has taught us that, not only climate, but the formation of the country has more or less influence upon stock. The heavy, short legged breeds not being suited for hilly, rocky localities, they are neither the best nor the most economical for such places, although they might be for localities of an opposite character.

Again, in selecting the best stock a man should not only know something of its adaptation to his locality, but also decide in advance for what purpose it is to be kept. If cows are to be kept for their milk alone, then a breed should be selected that is known to excel in this particular, but if stock is to be used for both dairy and beef, then a mixed breed is preferable. In sheep husbandry, similar principles control profits. The finest wool breeds are not as a rule the best for mutton, therefore it would depend somewhat upon locality and markets in selecting the best.

Fast trotters are not the best horses for farm or heavy work on the road, although the tendency at the present time is to produce those possessing great speed, even at the expense of other and far more valuable qualities.

The best of anything is that which is the most useful, durable, and yields the greatest profit on the money invested in purchase and cost in keeping. Always purchase the best, but be sure that it is what you want and adapted to your surroundings and circumstances.

ENGLISH FARMING.

The farmer who knows nothing of the state of agriculture beyond his own immediate circle cannot hope to succeed in these days. The success of others must at all times stimulate us to further exertion. What others have done we too can do. We may have disadvantages to contend against, but we have much in our favor. We well remember the farms of the old country, the well kept farms, the fields free from weeds, the barns and granaries filled with grain, the heavy meadows, the rich pasture. Let us, farmers, rival the good old land in our agriculture. Learn the science, and practice it diligently. The average yield of wheat in Canada is greater than in any other part of America, but it is not so great as you make it. It is very much below the average of the British

isles. An American, Professor G. H. Cook, State Geologist of New York, having seen the state of agriculture in England speaks as follows on his return:

"Of all the other crops, the great wheat crops surprised me most. The English farmer may justly pride himself on his knowledge of this kingly cereal. Their wheat straw is stiffer than ours, and stands up better; the head is large, and the colour bright and clear. The uniformity of their fields is remarkable; no bare, thin places; no wet places or winter-kills. Some fields that I saw would average thirty, some thirty-six and others forty bushel per acre; sixty and sixty-four are often reported. One field that I saw gave an average of forty-four, and I heard of an average of sixty-eight bushels per acre. That wheat I did not see. But I am well satisfied that the yield is from fifty to one hundred per cent. beyond our American average. Now, how is this done? First—the English farmer does not expect good wheat except on good land, well manured. Second—he pulverizes thoroughly and makes the best possible seed bed for wheat. He ploughs, cross-ploughs, then rolls, then harrows with a fine-tooth pulverizer; then he drills the seed, and covers from an inch to two inches deep, and if the soil is sandy, he rolls lightly again. On poor spots he sows a few hundred weight of nitrate of soda; and this special fertilizing brings up the thin places, and makes the crop even from side to side of the field.

J. J. Mechi, on a farm of 170 acres, makes more wheat and vegetable crops according to the size of his farm, perhaps, than any other farmer. He has grown eight quarters—sixty-four bushels—of wheat to the acre, on a field of seven acres. All his stall manure is kept under cover, and in the Spring he cultivates between the rows of wheat and applies 300 pounds of salt and guano to each acre.

CLEARING LAND.

On this subject Canadian farmers need little advice but a few hints, even on matters which are most familiar, may sometimes be of use. But to profits lately coming from countries where forests do not interfere with the work of the farmer, such hints will be doubly useful.

There are three methods to be pursued in clearing land where the timber is to be burned on the ground. First, underbrush and pile all the brush close and cut up the old logs and down trees. Under-brushing means cutting every year a large timber on, or as near as possible to, the brush heaps that you have already made, trim every limb close, and pile the brush on the heaps; cut the bodies from 14 to 18 feet long; leave the rail timber standing until you burn, because if you fall it when you fall the other timber you would be likely to burn it up. When there is saving timber to be saved, under-brush in the fall and cut the saw-logs in the winter, and get them out of the way; then cut the other timber as above stated; burn in June or August, and then "log off." If you can, get it off time enough for winter wheat; plow with a shovel plow, if not too much sward, and seed with grass seed. This method is attended with the most labour, but you get the use of your land the first season. Many fail in clearing land by not taking enough pains in burning out and piling brush.

The second method is to windrow; that is to under-brush and throw the small trees in windrows, five to six rods apart; then fall the large timber on the windrows and lop down the limbs and throw in the brush that does not fall on the heaps, and leave the bodies without cutting up. Let it lie about three years, then put fire in, in a dry time, and burn it; then throw poles across the logs where you want to put them, and build a fire on them, and by attending to it you can burn the logs off. In this way, however, the land gets foul.

The third method consists in under-brushing and girdling the large timber—that is, chopping through the bark around the trees. When the trees are dead and dry, cut and fall across each other as much as possible and burn. Trees should be girdled in June. In cutting up timber a cross-cut saw can be used to good advantage if it can be kept in good order. To have the stumps rot the quickest, cut the timber in June.

FEEDING HOGS. In an experiment detailed in *Dell's Farm Journal*, where hogs were fed on potatoes and oats, the excrement showed by the iodine test that a large portion of starch was passing off undigested. The addition of a small amount of peas to the feed caused all the starch to be appropriated to the animal economy. Experience has demonstrated that a variety of food is essential to the perfect development of animals. When hogs are fed for any length of time on the same food they become "glatted."

SALT ON WHEAT. John Burgen, of Palmyra, Illinois, writes to the *Rock River Farmer*:—About the 29th of March, 1871, I sowed 10

acres of wheat, on 2½ acres of this piece I put one barrel of salt. The whole piece was subjected to the same cultivation, sown with a sower, cultivated and harrowed once. On the 2½ acres the salt was sown broadcast and cross-harrowed. Now for the result. The piece sown with salt yielded 23 bushels to the acre; the balance twelve. Where the salt had been sprinkled I also found the berry to be large and plumper, and the straw yellower and stronger. I do not know as the result would always be as

THE TIME TO CUT WHEAT.

We have been taught to cut wheat when it was in the dough state—when the stock just below the head had turned yellow, while the remainder is yet green. That this rule is correct, so far as British husbandry, Canada, and all countries of low temperature at the time of the harvest, are concerned, there can be no doubt. The harvest in such countries comes after the great heat of the season, say in August and September. There the ripening is slow, and the harvest is extended through two or three weeks; but that is not the case in this part of the country, for we have but a few days in which to do our wheat harvest. The maturity of the grain is so rapid that it must be closely watched.

If we cut in the stage indicated as above, we will have shrunken grain, for the great heat cures the straw so rapidly that the nutriment that the soft kernel yet requires is unable to reach it, and the result is failure to fill out the grain plump. The grain must be cut just at maturity, and not delayed until it is in that state that farmers call dead-ripe, for then we are liable to lose by the grain shelling out.

If we could put our newly cut sheaves in the shade until the grain and straw was fully cured, it would be all the better; but this cannot be done, and we must be content to take things as they are.

It is only necessary to call the attention of farmers to the difference in the season of cutting, and effect of heat the time. Within a distance of the twenty miles, I have seen a month's difference in the harvest of wheat, simply owing to the elevation that gave a lower temperature also prolonged the harvest, or the curing process was more gradual. In hot seasons, our wheat harvest is but a short week; while in a cool season it is extended some days. For this season it is almost impossible to fix the time for a trial of reapers in the harvest field for any length of time in advance.

This peculiar condition of the harvest is a drawback to the culture of wheat on a large scale in this part of the country, as it is almost impossible to obtain the help needed to secure the crop in the limited time. Ten acres is a good day's work for a reaper, and this requires from 7 to 8 hands to do the work. It is very true that 15 or 18 acres are sometimes cut and put in shock, but this means 12 to 14 hours' labor, which few men can or will perform for any length of time. We may, therefore, limit the wheat crop to 60 acres for each reaper, and another 60 acres for oats. Then the thrashing must follow the busy season. All of this raises the price of farm labor from \$1 a day and board to \$2 or \$3. This teaches us that the wheat crop must take its place in a system.

MAXIMS FOR THE FARMER.

1. Only good farming pays. He who sows or plants, without reasonable assurance of good crops annually, had better earn wages of some capable neighbour than work for so poor a paymaster as he is certain to prove himself.
2. The good farmer is proved by a steady appreciation of his crops. Anyone may reap an ample harvest from a virgin soil; the good farmer alone grows good crops at first, and better and better ever afterwards.
3. It is far easier to maintain the productive capacity of a farm than to restore it. To exhaust its fecundity, and then attempt its restoration by buying costly commercial fertilizers, is wasteful and irrational.
4. The good farmer sells mainly such products as are least exhaustive. Necessity may constrain him, for the first year or two, to sell grain or even hay; but he will soon send off his surplus mainly in the form of cotton, or wool, or meat, or butter and cheese, or something else that returns to the soil nearly all that is taken from it. A bank account daily drawn upon, while nothing is deposited to its credit must soon respond. "No funds," so with a farm similarly treated.
5. Rotation is at least negative fertilization. It may not positively enrich a farm; it will at least retard and postpone its impoverishment. He who grows wheat after wheat, corn after corn, for twenty years, will need to emigrate before the term is fulfilled. The same farm cannot support (nor endure) him longer than that. All our great wheat-growing sections of fifty years ago are wheat-growing no longer, while England grows large crops thereof on the

very fields that fed the armies of Saxon Harold and William the Conqueror. Rotation preserved these, as the lack of it ruined those.—*Boston Journal of Chemistry.*

IMPROVEMENT OF GRASS LANDS.

Thousands of meadow and upland pastures are producing less than half the quantity of hay and feed which the land is capable of, from a deficiency of plants of those kinds which are more productive and suitable for the soil. In some cases, where the pasture is very foul with weeds and moss, it is advisable to pare and burn the old sward, and resow the land entirely, as above directed. In some other instances it may be desirable to drain and manure the land; but in most cases great improvement may be effected by merely sowing renovating seeds (which should consist of the finest and most nutritive kinds of perennial grasses and clovers) in the following manner: Heavy harrows should be drawn over the old turf early in the spring, to loosen the soil for the admission of seeds, which, if sown freely, will occupy the numerous small spaces between the grasses already growing, and supersede the coarse grasses and noxious weeds. After the seeds are sown the land should be carefully rolled. It is a good practice to sow these seeds at the same time as the top-dressing, if any is applied; but this is by no means necessary. The months of February, March and April, are proper for sowing the seeds; the earlier the better, as the old grass will protect the young from frost. It is also useful to sow in July and August, immediately after carrying the hay. Should the old turf be very full of moss, this is generally an indication that draining would be beneficial. The following is, however, an almost infallible remedy for the moss, not only destroying it, but preventing the growth in future:—Mix two cartloads of quicklime with eight cartloads of good light loam, turning the compost several times, that it may be thoroughly mixed and the lime slacked, and spread this quantity per acre over the pasture, dragging the turf well with iron harrows.—*Land and Water.*

PACKING THE SOIL.

In setting out plants on newly-ploughed light soils, there are few persons who fully appreciate the importance of making the soil compact about the roots. More than two weeks since I had several hundred strawberry plants set out in light, loamy soil, only slightly moist at the time; and, although the planting was carefully done, I concluded to try the experiment of rolling the entire surface over, plants and all, with a heavy iron roller. My head gardener thought this was useless; but I had it done, leaving three rows untouched. The result shows the benefit of compressing the soil; for those in the rolled portion of the bed are alive, while the others are dead, there having been no rain since planting. During my entire experience in gardening I have found that this packing the earth above the roots of recently planted trees and shrubs is one of the most important but usually most neglected operations. It is very difficult to make workmen do this; but it should be insisted on by every one who is setting out choice plants. If farmers would use the roller more on their meadows, and grain fields, they would find their crops increased far more than the cost of application. Wherever the soil is light the roller is needed to make the surface more compact, keep out the drying, hot winds, compress the earth against the seeds and roots of small grains, and in compact, clayey lands, the roller should be used to break up the lumps and pulverise the surface soil, thereby allowing the young plants an opportunity to grow. The proper manipulation of the soil is one of the operations belonging to successful agriculture and horticulture, of which very few persons seem to know anything. (To tell a man that he must make his soil deep, rich and light, and then roll it down, seems to be contradictory advice; and so it is to those who have had no experience in such matters; but it is no more unphilosophical than heating cream to make one portion more compact and the other a thin liquid.—*Moore's Rural New Yorker.*)

TO WASH FLANNELS.—It is said that by putting an ounce of borax to a gallon of the water in which flannels are to be washed, that not only will shrinking be prevented, but the garments will be better cleansed.

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MANAGEMENT OF WEEDY LAND.

At this season of the year noxious weeds are pushing upward with amazing rapidity. In fields where it is not practicable to root them up with some implement or by pulling them by hand, the tops should be kept down by a frequent use of the scythe or horse mower. It is an exceedingly bad practice to allow noxious weeds of any kind to go to seed, as the mature growth strengthens and fortifies the roots of perennials against any injury, except the total eradication of every minute root. But if the tops are kept cut down short, the roots will be so much exhausted by reproducing new tops that grass will soon gain the ascendancy over the weeds and maintain it. The grass of a meadow that is infested with so many weeds that it is not practicable to pull them before the crop is fit to be moved should be cut as soon as the blossoms of the weeds begin to appear, even if the grass has not attained half its usual height. If weeds are permitted to remain until the blossoms have fallen, the seeds will mature and be distributed over other fields. In many pasture fields large bull thistles throw out such broad leaves and branching tops that more than one acre out of six or seven is so completely covered with this growth that domestic animals cannot reach the grass which grows beneath the spreading tops. When the number of such pests is small, the most economical way to exterminate them is to cut off the roots two or three inches below the surface of the ground with a sharp bog hoe or mattock, which will be the end of them, as this species of thistle is biennial, and root and branch will die at the end of the growing season. The object of keeping the growth down by mowing is to prevent seeding the next season, and also to allow the grass to grow instead of thistles. By judicious management all such jobs may be performed between showers and in wet and lowery weather, when laborers cannot make fences, cure hay or cultivate and hoe among growing crops. By adjusting the cutting bar of the mower to run four inches high, one horse would mow over one acre per hour with comparative ease. In case there is only a small patch of weeds here and there, let the tops be mowed frequently with hand scythes.—*N. Y. Times.*

PLASTER.—A correspondent of the *New York Tribune* says:—If a person will sow plaster when the land is dry and warm and likely to keep so for a few days, he will be surprised at the results, for plaster is a great absorber of carbonic acid gas, which is the life of plants, and not ammonia, as stated; but if he should undertake to sow it on wet land and in a cold bleak time in the Spring, when the silver drop hangs at the nose, he may look with both eyes for the good results, and he will fail to see them.

Orchard and Forest.

INFLUENCE OF IRON ON THE PRODUCTIVENESS OF FRUIT TREES.

In the last number of the *Advocate* was an article on the beneficial effects iron was thought to have on fruit trees. We now give another testimony to the same effect, that we have met in the course of our morning's reading:—

IRON FOR DRESSING IN ORCHARDS.

At a recent meeting of the American Institute Farmers' Club, Mr. Wagner, who lives on Long Island Sound, about fifty miles east of New York, exhibited some prunings from his orchard to illustrate the effect of putting iron around trees. He took an old place with twenty trees in the orchard, full of dead limbs with yellow leaves, and the crotches oozing thick gum. He gave the earth a good top-dressing of iron, breaking up old plows and scattering the fragments. The effect has been marvelous. The trees have renewed their youth, and now look strong and thrifty. The bark is tight, and the leaves are green, and the borer has disappeared. He thinks the same of iron in peaches, ground up and spread on orchards will prove a valuable fertilizer for fruit trees of all kinds.

LIME FOR SOILS OF FRUIT ORCHARDS.

On most soils, or in most localities, a proper dressing of lime is useful to both peach and pear trees. There are some soils where it will not prove of much benefit, but we are unable to give a certain or infallible indication by which the propriety of its application may be known before making the trial. It would not be so likely to be useful where the ground has been previously repeatedly or heavily limed, or where the soil was poor for a want of the application of yard manure or by plowing under green crops. We have known it to double the growth of trees on soils that appear to be quite similar to others where no benefit was produced. Over doses, or uneven application, might be applied safely at the rate of 100 to 200 bushels per acre, but magnesia lime should be used very cautiously. There is no material difference between common stone lime and burnt oyster shell.

MULCHING FRUIT TREES.

Every year shows the advantage of mulch-fruit trees. In the first place, an abundant mulch of straw or chip litter, leaves, or what not, retards the development of the fruit buds, and saves them from the late frosts, which this year have destroyed half the fruit crop. Then it retains the moisture longer in the soil, keeps it more uniform in temperature, keeps the fertilizing elements in a more soluble state, and makes stronger and better growth of wood; and all of these unite to produce more perfect fruit. Mulching is the surest means especially in dry or well-drained soils, of securing vigorous and healthy trees, and it is only such trees that will withstand the ravages of the borers, caterpillars, and other diseases to which our fruit trees are subject. We have this season noticed many instances where fruit trees have been mulched with straw only, and in every case the benefits to the tree were most remarkable. Instead of burning the straw, put it around your fruit trees.

ORCHARDS.

In our little rambles about town and through the country we are in the habit of walking with our eyes open. We do not merely have them open to see that we are going the right road, or to enable us to avoid any obstacle in our way, but open also to observe and note down in our memory much that others, though having as good eyesight, might pass by unobserved. In this manner we treasure up little items of knowledge for future use. We observe the care bestowed on gardens and fields, and we partake, with the owner, the pleasure of the well-kept border of flowers, and the sweet scent of the orchard bright with blossoms.

We do not always see matters so well managed and in such good order. We have taken down a few hints about orchards: Some farmers seem to think that when they have planted an orchard they need take no further care of it, and leave it to itself. In this they are much mistaken. The young orchard will doubtless thrive better the more carefully the soil is tilled. Frequent tilling of the soil serves to enrich it, keeps it free from weeds, and helps also to keep away injurious insects. Thousands of these pests find a breeding-place and a safe retreat in the weeds that should be carefully extirpated. Till the soil of young orchards frequently with the fork or hoe, not with the plough, as it would be apt to disturb and injure the tender roots of the trees.—Have a root crop in the orchard—mangolds, turnips, potatoes, or anything else that will need frequent hoeing. The crop will pay you for the labor in the culture. Keep the soil in good order and the bark of the trees clean, and if inclined to be bark-bound or overgrown with moss or lichen, scrape the bark down with some blunt instrument, and occasionally wash the stems and limbs as you would wash yourself. Cleanliness contributes to the health of the trees as much as to your own. All this care requires little labor, but it is necessary to the well-doing of your orchard. By keeping the bark of the trees clean you will in a great measure prevent its being the receptacle of insects. Remember that preventative is better than cure.—[*Ass't Ed.*]

COVERING FOR THE WOUNDS OF TREES.

We have all found, to our cost, how injurious wounds are to trees, and more than once have we seen highly valued trees die from the effects of neglected wounds. We give from the *Horticulturist* the following recipe:—"The following compound we have found to be the best and most lasting covering for wounds, viz.: rosin, 1 lb.; tallow, 1 oz.; alcohol, 5 oz.; spirits of turpentine, 1 tablespoonful. Melt the rosin and tallow together over a slow fire; then remove and add the turpentine and alcohol, turning in the alcohol slowly and stirring briskly, being careful not to have the rosin too hot or the alcohol may take fire. Stir the mixture until nearly cold, then turn into a wide-mouthed bottle, and keep corked when not in use. Apply this cement in a thin coating with a suitable paddle, when the alcohol soon evaporates and the cement becomes as hard as the wood itself, and will remain on the wood for years.

FOREST CULTURE.

Time after time have we urged upon the farmers of Canada the good policy of protecting and preserving at least some portions of their noble forests, and of planting trees for shade in exposed places.—What we have so incessantly pleaded for is being done by our neighbors over the borders. For shade for cattle and crops, and for the prevention of too great evaporation of moisture from the soil, it is necessary that we plant and preserve timber. At the National Agricultural Congress, recently held in the United States, the following resolutions were passed:—"1. That we recommend farmers throughout the United States to plant their hilly or otherwise waste lands, and at least ten per cent. of their farms, with trees, in such manner as to provide shelter belts or clumps of rapid-growing and useful timber. 2. That we solicit the legislatures of the several States to pass laws providing bounties for planting trees, encouraging the planting of the highways, and for the provision of State nurseries of young timber trees, and also the appointment of an arbor day for the annual planting of trees, as has already been done in the State of Nebraska. 3. That we ask the Congress of the United States to require, so far as practicable, that railroad companies and settlers hereafter receiving the benefit of the homestead and other acts donating lands, shall plant with timber trees one-tenth of the land so donated."

PLANTING FRUIT TREES.

Some people planting fruit trees prefer getting them of such an age and size that they may soon begin to bear and repay them for their expense and labor. Having seen the results of planting trees at too great an age, we would give our readers a few words of advice on the subject:—

A gentleman wished to plant some fruit trees, and was desirous of having a return for his labor as soon as possible. He planted trees twelve years old. He took the greatest pains in planting them, taking care to remove from the nursery those with large roots, and had large holes prepared for them, applied good compost to them, and during the summer had them well watered. He has watched them now for more than four years, and from all his trees he has not yet had a peck of fruit, though they had begun to bear the season before their removal.

This is but one instance of many illustrating a lesson in planting, never plant any but young trees. If you do your expectations of succeeding in fruit raising are sure to be disappointed, and what little fruit you may be fortunate to get from your old transplanted tree will never be as good or as large as if the tree had been planted when young.

In planting shade and ornamental trees we prefer, in like manner, to plant young trees. In the first place, there is less risk

of any failures; secondly, we can train a young tree in the most desirable form, and thirdly, young trees when transplanted grow faster, so much so that if trees of different ages be transplanted at the same time, the young trees will in a few years have outstripped in their growth those that were planted much older and larger.

Of all trees, none of the cone-bearing species should be planted after they are five or six years old; after five years it is very doubtful if they will succeed.—[*Ass't Ed.*]

From the April number of the *Gardener's Monthly* we take the following:—

"In regard to the yellows in the peach we have little more to offer than we stated in our January number. We there suggested it was owing to the fungus at the roots, the effects of which pervaded the whole tree. Since then Dr. Taylor, the microscopist of the agricultural department at Washington, acting on our suggestion, has taken the inner bark of a stem of a yellowed peach tree, taken just above the ground, and found it infested by a moldform, thread-like fungus, as we supposed. When the season arrives for getting in the ground, he will go to the root of the thing."

We are safe in saying that the right direction has at last been reached in the investigation of this disease and its remedy. As yet the subject has not been exhausted, nor has it certainly been reached in the eradication or cure of the evil. This, however, is certain, that the application of hot water and ashes has saved many trees. Query:—Is this due to the action of heated lime about the collar of the tree well covered up, by slacking produce heat enough to accomplish the same result?

Every tree in every orchard ought to have a pail of hot water poured around the collar of the tree every spring. This would accomplish two results, namely:—It would kill the peach borer or grub, and arrest the yellows in its incipient stages. Either one of these results would amply compensate the labor involved.

CURCULION PLUMS.

I have various methods for keeping these insects off plum trees, but none so simple nor yet so effectual as the following:—Soak corn-cobs in sweetened water until thoroughly saturated, then suspend them to the limbs of the trees a little while after blossoming, being sure to burn the cobs after the fruit ripens, as they will be found full of young insects. A good plan is to change the cobs every few weeks. My theory is this: that the insects deposit their eggs in the cobs in preference to doing so in the young plums. The first season I tried it upon one or two only, and in the summer was rewarded by a good crop of as fine plums as ever ripened, while those on the other trees fell off when about half grown. Next spring found sweetened corn-cobs dangling from the limbs of all my plum trees, and the summer found them full of delicious fruit. I have never known it to fail, and I hope every one who has a plum tree will try it.

WORTH KNOWING.

A correspondent of the *Country Gentleman* says if copperas and saltpetre water is used around pear trees, the tree will show the effects in a large yield of fruit. He tried this on a Bartlett pear tree that had yielded no fruit for two years previous; that very year it yielded one hundred and fifty-five large, fine pears, and the following year two hundred and fifty large ones, and is still doing finely. If pear trees want iron, which most soils are deficient in, sulphate of iron, or copperas, is a good way to supply it.

BUDDING.

"The season for budding depends upon the proper condition of the stock intended to be worked, and upon the maturity of the buds to be used. Standard pears usually require attention first, as the stocks are among the first to mature their growth, and, as a rule, they are budded as soon as buds can be had mature enough to be worked.

"The buds must be hard, i. e., well matured. This is particularly true of pears, cherries and plums.

"The budding season begins about the middle of July, commencing with standard pears, then follows plum on plum, cherry on Mazzard, dwarf pears, plum on peach, cherry on Mahaleb, apples, apricots, nectarines and peaches, in the order named, as near as can be enumerated. The stock is in the best condition to work at the time it begins to show signs of cessation in growth. When the growth is very rapid the sap is thin and watery, with little disposition to heal. Cherries are the most particular as to proper condition of bud and stock, while peaches are the least so.

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"The leaves should be taken from the bud-sticks as soon as cut from the tree, as the branch withers very quickly with the leaves on. Cut away the leaves a little beyond the point of the bud with a sharp knife, placing the bud-sticks in damp moss or a damp cloth as soon as prepared. Buds should be cut with a very thin portion of wood, and my practice is to leave this in, except in cases of very small stocks.

"In cutting a bud begin below, bringing the knife out above the bud; this gives it a good point and shape. In making the cut upon the stock for the insertion of the bud, the horizontal cut should be first made with the blade held at an angle of 45 degrees, the edge towards the ground. This forms a lip, under which the point is thrust, obviating the necessity of raising the bark with the handle of the knife. Stocks that will not work in this way, without the use of the handle to raise the bark, will not pay the budding. The northwest side of the stock is the best for the insertion of the bud.

"Careful tying is necessary, and the bandage should be drawn close to the eye, above and below, drawing as tight as a good bass bark tie will warrant."

This is the inner bark of the *Tilia Americana*, commonly called linden, and is procured by stripping the bark from the trees. It is then cut into convenient lengths for handling, and is placed under water for a few days. The inner portion will then separate easily, when it should be dried and laid away for future use. When wanted for budding, it is cut into pieces of about ten or twelve inches in length, and these are then subdivided into narrow strips of about an eighth of an inch in width. Where the bark cannot be readily obtained, cotton or woollen twine are used, and form a very good substitute.

THE BORER.—A careful study of the habits of this pest to the orchard, will establish the following facts, which, if promptly and vigorously acted upon, can hardly fail to secure exemption, to a great extent, from this attack. It seldom attacks strong, healthy trees, but prefers those that, from being recently transplanted, or from neglect, have become weak or stunted. Where trees are trained with tall, naked trunks, exposed to the scorching rays of the sun, the bark becomes thickened and comparatively inert, and especially so when the trees lean so as to receive the direct rays of the sun during the hottest part of the day. This furnishes an inviting field for the operation of the borer, producing what are commonly called "sun scalds," but a close examination will invariably show to be the work of this insect.

After a careful study of all the remedies proposed, as also the habits of the enemy, we would recommend the following as the most effectual: Mix soap and water to the consistency of paint, and into this throw any refuse tobacco that can be procured; let it soak for a few days, or steep for an hour or two over a fire, and when cool, apply with a brush to the trunk and large limbs of the tree; and repeat the same as often as it may be washed off by drenching rains, till about the first of July. After which, for that year there is no danger. Keep an eye constantly on the watch for the intruder, and when his pathway can be discovered, kill by running a wire around him and plugging up his hole with soap.

A wide, low-spreading top that will completely shade the entire trunk, is almost a sure preventative, and if the ground can be kept quite wet for two feet around the tree during most of May and June, it is nearly as effective.

MANURING ORCHARDS.—In efforts to keep orchards in bearing, mistakes are often made in the place for applying the manure. It should not be in contact with the trunk, unless for the purpose of a mulch, and to be removed early in the spring. The terminal roots of an apple tree fifteen years old, in good soil, are from twelve to sixteen feet from the trunk, and still farther in older trees. These fine, hair-like roots take from the soil all, or nearly all, the nutriment for the fruit. Consequently the manure should be applied where they are—for a tree fifteen years old, twelve to sixteen feet from the trunk; for one of twenty to twenty-five years growth, eighteen to twenty-three feet; and for a very large, full grown tree,

still farther. But in all cases we would commence the dressing as much as three to six feet from the trunk, thickening it outward, and then tapering off, so as to make the dressing about where we suppose the finest roots end, but much reduced both inside and outside of that ring. If the object were to smother the tree in grass and weeds, we would pile the manure against the trunk, for the rains would wash it outward and would surely produce growths of some kind, but not of apples. Why do we see everywhere so many orchards with trees looking somewhat thrifty bearing abundant leaves, but no fruit? It is not because the soil is exhausted; the soil, in many cases, if plowed up and cultivated, would give forty bushels of corn, and then, if seeded down, two tons of hay to the acre. Extreme poverty of soil is not always the cause of failure. They fail to bear, because the growth and former fruiting of the orchard have exhausted the peculiar substances required for the apple tree and its fruit. The tree gets enough of its peculiar food to keep it thriving moderately, but nothing to spare for making fruit; and so the tree lives as long as it can, by appropriating all the food it can get to sustain its own life, but yields no more fruit till the lost ingredients are restored.

As to how these can best be returned to the soil, lack of space forbids us now to enlarge; but we will say here, that for large trees, bearing less and less every year, the following compost could hardly fail to pay well. Two cart loads of fresh virgin soil, on which no fruit trees had ever grown; two bushels of lime, two of wood ashes, and one of common salt, for each tree; less of the same for smaller trees. If apple tree wood is ever burned as fuel or otherwise, its ash may well be preserved and applied to the orchard, as it of course abounds in the material required. Instead of the fresh virgin soil above mentioned, peat, black vegetable mold of any kind, and decayed leaves, grass, or weeds, may be used. A mixture of all or any part of these, is good. We think barn manure is not the right thing. If green, it may prove injurious; if well rotted it is worth more for other purposes. Soap suds, refuse lime, after whitewashing or plastering, and the lime from old buildings torn down, are all good, especially the suds. Throw it up among the lower limbs and let it trickle down the trunk. The youngest trees may be treated in this way with advantage, whenever any roughness of the bark appears, provided the suds be not over strong. As it usually comes from the laundry it is safe. — *Observer.*

Stock and Dairy

ESSENTIALS IN THE IMPROVEMENT OF STOCK.

At a recent farmers' discussion in Scotland, the following points were taken up, as the leading essentials in securing the improvement of stock:—"1, pure blood; 2, high strain of blood; 3, a sound constitution, free of hereditary disease; 4, substance, symmetry and quality; 5, a docile temper." One of the speakers gave the following good advice—since, as he said, it is most important for any farmer that he should proceed as rapidly, and at as little outlay as possible:—

"As it is the general recognized maxim that the exterior form partakes more of the conformation of the sire than of the dam, and as one sire will, to some extent, improve the whole of each year's stock, while a female gives but one superior beast, I would say procure superior males at whatever cost; and should they be too expensive for the size of the farm, let two or three farmers join in the purchase and keep of one animal."

CLOVER FOR HOGS.

An Ohio hog raiser advocates the system of pasturing on clover in the summer. He presents, as the advantage of the plan, the statement that an acre of ground in

clover will pasture five hogs four months, and that it will take the corn from half an acre to feed them the same time. The cultivation of the corn he counts equal to the rest of the other half acre. He further claims that hogs pastured on clover are in far better condition than if fed on corn, as they are better framed, healthier, and eat better, and also states that the land is enriched by the clover pasturing.

CROSS BREEDING.

The celebrated naturalist, Charles Darwin, makes the following remarks on the effort to produce distinct races by cross-breeding:—

The possibility of making distinct races by crossing has been greatly exaggerated. There can be no doubt that a race may be modified by occasional crosses, if aided by the careful selection of those individual mongrels which present the desired character; but that a race could be obtained nearly intermediate between two extremely different races or species, I can hardly believe. Sir J. Sebright expressly experimented for this object—and failed. The offspring of the first cross between two pure breeds is tolerably, and sometimes (as I have found with pigeons) extremely uniform, and everything seems simple enough; but when these mongrels are crossed with one another for several generations, hardly two of them will be alike; and then the extreme difficulty, or rather hopelessness, of the task becomes apparent. Certainly a breed intermediate between the two very distinct breeds could not be got without extreme care and long continued selection; nor can I find a single case on record of a permanent race having been thus formed.

When two distinct races are crossed, it is notorious that the tendency in the offspring to revert to one or both parent forms is strong, and endures for many generations. I have myself had the clearest evidence of this in crossed pigeons, and with various plants. Mr. Sydney states, that in a litter of Essex pigs, two young ones appeared which were the image of the Berkshire boar that had been used twenty-two years before, in giving size and constitution to the breed. I observed in the farmyard of Betley Hall, some fowls showing a strong likeness to the Malay breed, and was told by Mr. Tollett, that he had, 40 years before, crossed his birds with Malays; and that though he had at first attempted to get rid of this strain, he had subsequently given up the attempt in despair, as the Malay character would re-appear.

MILK, BUTTER AND CHEESE—COMPARATIVE PROFITS.

The following extract on the subject of the comparative profits of butter and cheese is taken from a paper read before the Farmers' Club, of Coldwater, by A. J. Aldrich:—

I propose now to say a word with regard to the profits of cheese as compared with butter.

In speaking of this particular topic, I have only one comparison to make, that is, with the average price of cheese and butter as received by farmers generally. The care of stock and of milk, so far as cooling and cleanliness are concerned, is the same whether we make cheese or butter. But there are many other things in making butter which take extra time and labor in doing them that can be dispensed with in making cheese. There is no setting of milk, there is no skimming, there is no care of the cream, and no working of the butter. After it leaves the milk can is the care of it at an end, so far as the farmer and his wife are concerned. Indeed the expense of making butter is double that of making cheese. The price for manufacturing cheese at our factories is 2 1/2 cents per pound; while the price for making butter is 5 cents per pound.

The question now is, how much milk will it take to make one pound of cheese, as compared with the quantity to make one pound of butter? Of course it will vary with different seasons, and even with different days. The amount of milk used in making one pound of cheese varies from 9 to 11 lbs.; to make one pound of butter, from 25 to 20 lbs. of milk. The result will prove that we can make from 2 1/2 to 3 lbs. of cheese where we can make one pound of butter.

During all the past year, butter has varied from ten to twenty-two cents per lb. During the months of July and August, it will take from 30 lbs. and upward of milk for one pound of butter. Indeed, I imagine that not many farmers will make a pound of butter from less than 32 to 40 pounds of milk during the sum-

mer. I do not make this statement rashly, but on the authority of Hon. Zadock Pratt, who began the business in 1857. He made butter, and for eight months it averaged over 39 lbs. of milk for one pound of butter. He was supplied with all the conveniences necessary to good butter making. If it took that amount with all his facilities, what would it take with the ordinary facilities of the average farmer? I think I would be perfectly safe in saying that the average farmer will not come up to the average of Mr. Pratt in that respect. If that is the case, the milk that will make one pound of butter will make nearly or quite four pounds of cheese. But for the sake of placing the matter in as favorable light as possible for the average farmer, I will take three pounds of cheese to one pound of butter, with the proportion and the average price of butter at 16c., and that of cheese at 12c., we shall have 37c. for cheese where we should receive 16c. for butter. In one case 30 pounds of milk brings 16c., in the other it brings 37c.; difference in favor of cheese of 21c. If we discount the price of cheese-making, we have 11 cents in favor of cheese. But we will take cheese at the lowest price and butter at the lowest price, and see where the balance rests. We said that nine cents was the lowest price for cheese. Three pounds of cheese would yield 27c., and one pound of butter 16c., or 11c. in favor of cheese. Deducting the price of manufacture, we have 11c. for butter and 18c. for cheese, or 8c. in favor of cheese. I am sure no one could ask for a better comparison than this, and the experience of dairymen will bear me out in these deductions.

TO KEEP HAMS IN SUMMER.

Some bag them and whitewash the bags, which is troublesome and somewhat expensive; some cover them with dry wood ashes and pack them in barrels and cover them thoroughly with pine shavings; but the best plan of all, and certainly the least expensive with all who have a smoke-house, and every farmer should have a good one, is to keep the hams hung up in the smoke-house, which should be kept perfectly dark at all times. Hams so kept two years old, were among the best we ever tasted. Uniform darkness is a complete protection against the attacks of insects. — *W. Rural.*

ASHES AS A CATTLE FEED.

One of our substantial subscribers, in a recent conversation, gave his experience in training neat stock affected with the habit of eating wood, chewing bones, &c. His cattle were one spring affected this way; they became thin in flesh, refused to eat hay, and presented a sickly appearance. He had no impression that their food lacked the constituents for making bone, but his neighbours used bone meal without noticing any good results whatever. At last, he put about four bushels of leached ashes in his barnyard, and threw out to them about a shovelful each day. They all ate as if with evident relish. After turning them out to pasture, he put one peck of dry ashes per week on the ground in the pasture. They ate all up, and gnawed off the grass where it had been lying. The cattle began to improve, gaining flesh and looking better than they had done for several years. He says this morbid appearance was unnoticed years ago, from the fact that the ground was new and ashy from the burning of the woods and land clearings. Latterly he gives one quart of ashes mixed with the same quantity of salt to twelve head of cattle, about once a week. — *Live Stock Journal.*

CARE OF HOGS.

A practical breeder gives the following advice, which, in the main, we think sound, for those whose herds are not too large, and who are engaged in mixed husbandry: To handle hogs to the best advantage, a pasture is needed of green grasses—clover, blue grass and timothy—and it is best if there is no running water or stock ponds in the lot. Hogs do better where there are no branches or stock ponds to wallow in. In place thereof, have good well water pumped for them. Having troughs made, and nail strips across eight inches apart, to keep the hogs from lying down in the water, and let these hogs be put on floors, to keep them from digging up wallowing holes. If any feed be given, it should be soaked in swill barrels for 12 hours before feeding—no longer—and fed to them as drink. — *Colonial Farmer.*

ENTOMOLOGY.

We have deemed it necessary to devote a column of this paper to the above subject. It is necessary that the farmer should know somewhat of the insects that may at any time destroy, or at least materially lessen, the produce of his fields on which he has expended much time and money, and when, perhaps, his remuneration seems almost within his grasp. To be thoroughly good and successful farmers we must be conversant with the science of agriculture. The skilled hand and brawny arm are not enough; there must be, directing and controlling these the well-informed thoughtful mind. We are no advocates for mere book-farming, a bare theoretical acquaintance with the subject. There must be theory reduced to practice.

In our last issue we gave an extract from an essay by Rev. Mr. Bethune on that pest of the farmer, the wheat midge. From the same source we now give some extracts relating to another devourer of the products of the farmer, the Chinch bug.

The name of Chinch bug has, in the West especially, as appalling a sound in the ears of the agriculturist as that of the wheat midge has ever had amongst us.— Happily the creature is but little known in this province, still it may obtain a foothold among us and prove a source of evil, as it has already been observed in Ontario. It appears desirable then that we should give some information respecting its nature and habits, when describing the special enemies of the wheat plant.

As far as we have been able to ascertain, the Chinch bug was first observed in the Province of Ontario in the autumn of 1866, by Mr. Johnson Pettit, of Grimsby. That so little is known of it in this country ought to be to us a subject of sincere congratulation. Since 1870 they have been a permanent plague to the farmers in the west, appearing every few years in perfectly incredible numbers and sweeping everything before them almost as completely as a swarm of locusts. The following vigorous and unvarnished account of their proceedings by an Illinois farmer will convey to the reader some idea of the havoc they create:

"There never was a better 'show' for wheat and barley than we had here on the 10th of June, and no more paltry crop has been harvested since we were a town; many farmers did not get their seed. In passing by a field of barley where the Chinch bugs had been at work for a week, I found them moving in solid column across the road to a cornfield on the opposite side in such numbers that I felt almost afraid to ride my horse among them. The road and fences were alive with them. Some farmers were at work mending the road at the spot, and the bugs soon covered men, horses and farmers till they were forced to quit work for the day. The bugs took ten acres of that corn clean, before its hardening falls being too much for their tools. Checked their progress. Another lot of them came from a wheat field adjoining my farm into a piece of corn, stopping now and then for a bite, but not long, though the corn was scarce in cussle. From wheat to sorge was at least sixty rods. Their march was governed by no discernible law, and went where there was most to eat. If I, a neighbor harvested one of the few fortunate fields, early sown and so lucky! we found them moving across his premises in such numbers that had we to drive out the family, house, crib, stable, well-crib, trees, garden-fences— one creeping mass of stinking life—in the houses as well as outside, like the lice of Egypt, they were everywhere, but in a single day they were gone."

In a future issue we will give the remedies, natural and artificial. We shall now give one more brief extract, describing their fecundity:

"In the spring when the grain has commenced to grow it issues forth from its hiding-place, and proceeding to the fields lays its eggs on the roots of the tender

grain wherever it can gain access to them. These eggs soon hatch and produce another brood. After a time they attain their full size, acquire wings, and proceed to provide for the continuance of their species. In the Western States the bug appears to have at least two broods in the year, and in the South even more. This fact coupled with its habits—like other true bugs—of taking food from the day of its birth to the day of its death, without the intermission of a quiescent pupal state, renders it so destructive and so difficult to combat."

For the Farmer's Advocate.

Second Meeting of the North Norwich Farmer's Club.

PRESIDENT'S ADDRESS—SUBJECT:—SOILING.

Every farming district has an agricultural history of its own. In this district we are living in the era which might be called the dairy era. It is with that part of dairying which constitutes the feeding of stock that we have to deal to-night.

There are two systems of stock-feeding in vogue. One in which the cattle, &c., roam at large over the fields, the other under which the animals are kept in stables year-round, the feed being brought to them. This latter system is called soiling. For the present, however, it is more convenient to limit the term "soiling" to that time of the year in which there is pasture sufficient to keep an animal in good condition.

The advantages of soiling, real and apparent, over the system of pasturage are many. In thinking of them many of us look upon the system of pasturage as a practice to be utterly done away with. Whether our predictions will come true or not, time alone can tell. However, blind as we are as regards future events, we can discuss the subject, partly from experience, partly from hearsay, and partly from our own ideas. Knowing, therefore, so little, practically, about the subject we shall often have recourse to various standard works.

Mr. Stephens, in his "Book of the Farm," says that one acre of pasture is quite sufficient to maintain an ordinary sized ox from May to October. He also says that "33 head of cattle can be maintained by soiling on 17 1/2 acres of grass the same length of time." There then we have a proportion of nearly 2 to 1 in favor of soiling, given by a man who says that soiling on a large scale is impracticable. Charles W. Dickerman, author of the latest American work on farming, says, "The experience of every stock-raiser who has given it a trial testifies that the profit is at least double." Thus we have too good authorities asserting that soiling gives double or nearly double the profit to that pasturing does. As far as our experience goes we can say nothing as regards the double profit, therefore we shall have to take their statements for granted until our knowledge is here issued.

But let us take our own ideas and put them with these seemingly extravagant statements and follow them up. The first thing to be considered is that would be necessary to add to our present practice to enable us to soil profitably, and what in our present practice would be unnecessary in soiling.

The only things to be added to our present system are summer stabling and more hired help. I say summer stabling, because I do not remember of ever seeing a winter stable which would be suitable for summer soiling. In this country, where we think more of keeping out the cold of winter than the heat of summer, we build bank-barns and stone stables. The nearest approach to stables which were warm in winter and were also suitable for summer use that I ever saw was at the Hon. Geo. Brown's farm. In fact his stables were nearly perfect for soiling. The buildings are high for being more stables, with nothing over head but the roof, while the generality of stables are so low that we can touch the floor above with our hands, if not our heads. Another advantage his stables have over ours for soiling is, the buildings are so wide that a horse and cart can pass through the feeding alley. Our feeding alleys are so narrow that we have no more than room enough to pass along with a forkful of hay. The general arrangement of our buildings is also faulty. For instance, farm buildings are generally placed on one side or end of the farm while they should be as near the center as possible.

To draw green feed from one end of the farm to the other, and the manure back again would make a heavy bill against soiling. A small field should also be enclosed with the stables to exercise the cattle in. Pure water should be in abundance. The stables should have the best of ventilation. Lastly, every animal should have a loose box of its own.

In soiling we would be able to do away with all inside fences and probably line fences. We would have the use of the land which at present is occupied by those fences, and save the money, interest and labor now spent in building and repairing such fences. We would save the grass which cattle tramp down in pasturing, besides the bunches of rank grass which grow up through the droppings of the previous year. The time spent in driving the cattle to and from the pasture would also be saved. The exercise which the animals take to collect food, in pasturing, together with the fretting and teasing occasioned by flies would be abolished, and the flesh, milk and general health of the animal thereby enhanced. All summer-fallowing could also be done away with as the frequent mowings would keep the land perfectly free from weeds.

Mr. Stephens' arguments against soiling are as follows:—"To cut grass, however, for all the cattle on a large farm, to lead it to the steading, and to supply them with sufficient litter in summer, I consider an impracticable thing, were it for no other reason than that the crop of grain on most farms cannot afford sufficient straw to litter stock the whole year; and if the sheep are included in the soiling system, adequate accommodation could not be provided them. The only way to treat them would be to soil them upon the bare land in hurdles, as is common in many parts of England; but such a practice would not suit the variable and wet part of the climate of Scotland. The objection to grazing is that the manure of the animal is entirely lost, is not a valid one, because land constantly grazed will support stock for an indefinite length of time; and it would not do that if the ground did not actually receive nourishment in lieu of the grass taken from it. Dissipation of the dung dropped on pasture cannot be great. In dry weather the water is soon evaporated out of it, and in rainy weather the water dissolves it among the roots of the grass, converting it into a state of good liquid manure. The greatest waste of dung is from the consumption of it by insects, and yet these leave their bodies in the ground when they die. The objection is thus freely theoretical. Cut grass and carry it off every year, and see how long time will elapse ere it can no longer be cut until manure be again applied to the ground. Does not this circumstance of itself show that the dung dropped on pasture is not entirely lost; and that the land derives an advantage from pasturage that it can receive in no other way, such as the fresh state of the urine discharged upon and absorbed by it."

Note.—As regards bedding we can manage with the greatest ease by employing muck as a substitute for straw. Another great addition to the manure pile would thus be made. As far as exhaustion of the land goes, surely we do not calculate to never put the manure on the ground again.

Mr. C. W. Dickerman's arguments in favor of soiling are as follows:—"For milk cows and fattening stock, stall feeding the year round is certainly advisable. The experience of every stock raiser who has ever given it a trial testifies that the profit is at least double. There is no doubt of it. If we could persuade every stock owner to adopt this soiling system, we should feel that we had done as much for our country as Fulton, Charles Whitney, or Elias Howe. It would increase the agricultural wealth of the country in a tenfold ratio. It would in five years pay the whole national debt. It is the only true economy in stock-raising. In our soiling system we include stall feeding, cutting and steaming food, and the husbanding of manures. Its advantages are, first, *exercising in fences*. All the fences required (and all there ever ought to be on any farm) will be a good sized yard to exercise them in. Now, a man having one hundred and fifty acres of pasture often divides it into six lots. To fence these lots costs not less than one thousand dollars; the interest and repairs on which every year will be sufficient to pay a man for doing all the extra work of soiling fifty head of cattle. Can't you invest your one thousand to better advantage? Again, each of these fences take up land. Your one thousand dollars worth of fences takes up from three to four acres of land. A second consideration is the saving of land. Four acres each, or twelve head to fifty acres of land, are required by the pasturing system,

and often six acres each, or only eight head to fifty acres. Put this fifty acres under cultivation, and it will keep twenty-four head as well, yes, better than it now keeps eight or twelve. We have already seen that the saving in fences will pay all the extra expenses of soiling, leaving one thousand dollars to be invested in the additional stock that can be fed under the new system. We venture to say that one and a quarter acres in hay and grain for winter soiling, and three quarters of an acre in grain crops for summer soiling, will be sufficient per head for any stock. We have statements from a large number of reliable men who practice soiling, and not one of them allows more than two acres per head. It will thus be seen that the same number of acres can be made to feed twice or three times as many cattle by the soiling system. Third, is the saving in manure, and this is the most important consideration of all. Manure is valuable even on the virgin soil of the prairies. No amount of manure is wasted when applied even to these. We have already seen the soiling system enables the farmer to keep double the number of animals on the same amount of land; it will also double the value of the manure of each animal, thus making four times the amount of manure to return to the fields. No land will ever become "exhausted" under such a system, but will constantly increase in fertility. A fourth consideration is, that there will be a large extra product of milk, butter, or beef; enough to pay for the labor of soiling."

To show the thing more clearly, let us place the two systems under account as well as we can. Let us suppose a farm of 100 acres divided into six lots with fifteen head of cattle, if pasturing, and thirty if soiling. Let also the average value of the pastured cows milk be \$30 during the soiling period of five months, whilst the milk of those under soiling averages \$35.00 the same length of time. We will also suppose that the value of the manure stables is \$500.00, whilst in addition to the usual amount of help we have a man and a boy.

SOILING.	DR.
To one man's wages at \$15 per month, for five months.....	\$75 00
One boy's wages at \$6 per month, for five months.....	30 00
Board for man and boy, at \$8 per month each.....	80 00
Interest on cows at \$30 per head, at twelve per cent, for five months.....	45 00
Interest on extra buildings at twelve per cent.....	60 00
	\$290 00

SOILING.	CR.
By thirty cows' products, at \$35 per head.....	\$1050 00
	290 00
Profit.....	\$760 00

PASTURING.	DR.
To yearly expense of fencing and rent of land.....	\$75 00
Trampling down of grass.....	50 00
Interest on cows, at \$300 per head, at twelve per cent, for five months.....	22 50
Time of driving cattle.....	7 00
Loss to cattle from undue exercise and flies.....	30 00
	\$184 50

PASTURING.	CR.
By fifteen cows' products, at \$30 per head.....	\$450 00
	184 50
Profit.....	\$265 50

Comparing the profits of the two systems we have soiling in the advance by \$494.50. It is very hard, if not impossible, to make correct estimates of all the little things that come up. The case is something like the "Alabama claims" for "consequential damages," without end. However, if the estimates are anywhere near the truth, soiling has an immense advantage.

We come now to the foundation of all success in soiling, viz., the green crops to be raised and fed. For a list of crops for soiling, we will quote a few sentences from the "Farmer's Book." "The crops for summer soiling are winter rye, which comes first, and is excellent to let the stock down from dry to green feed; next clover and other grasses in succession; then rye again, for rye will furnish several cuttings during the season; then early sown corn, oats, sorghum and other crops. Corn should be sown every fifteen days until

the first of Aug we would advise Five acres of winter sowed at five of red clover; oats."

To these m grass and ve Mr. Stephens dry, sanly so not do on a we 5 to 10 tons tivation. Orel grass of rapid ed to shady pl time as clover, times in a so tendency to gr sider, would be ing. They res with oats the valuable feed.

In conclusio just considere and I hope ere that will give i not think to g soiling by rais corn next you arnful over t twice a day. that way, and not say that s as proof such

Amongst th not necessary one quite imp will be able t without robbi pasture the ro large 'his you horses, &c.

Mr. Micha the next Pre his subject.

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WHAT TO

Now that t known, the m obvious, and but also what of the sympto abstraction of of cure. And play. I have lized by hea it into a buck of the sufferer the normal pu the water in cooled, its re wasterly give by the cycli glassy eye ca If the per short, the an ly as well as cover suffic and to strug escape, the p perfect prog jury the m few hours t lessons of th overlooked, diseases to as experim 4500. Ther for the fact death so in passing by a Samaritan n be useful, sion on a fortunately, that any o fallen man, find upon i any just, a trouble, it i the skin be sunstroke, a patient neu hydrant, st after backe until conse tense heat c Wood.

Among t music com music teach by the resi the follow advertise teacher, ei been both vices."

the first of August. For fifty head of cattle we would advise the following summer crops: Five acres of winter rye; twenty acres of corn, sowed at five different sowings; seven acres of red clover; and five acres of timothy or oats."

To these might be added lucerne, orchard grass and vetches or tares. According to Mr. Stephens lucerne is best adapted to light, dry, sandy soil abounding in lime. It will not do on a wet soil at all. It will yield from 5 to 10 tons per acre, according to cultivation. Orchard grass is described as a fine grass of rapid growth, being specially adapted to shady places. It blossoms at the same time as clover, and may be cut two or three times in a season. Its chief fault is its tendency to grow in bunches. Vetches, I consider, would be a very valuable crop for soiling. They resemble peas in growth. Sown with oats they give an immense amount of valuable feed.

In conclusion, I would say that soiling as just considered, is certainly very advantageous, and I hope ere long to see it tried in a manner that will give it every chance of success. Do not think to gain the advantages of thorough soiling by raising a little patch of Western corn next your pasture field, and throwing an armful over the fence to each cow once or twice a day. However, if you do go at it in that way, and do not reap any great gain, do not say that soiling will not pay, and bring up as proof such a practice.

Amongst the things in our present practice not necessary in soiling, I forgot to mention one quite important item. The rich farmer will be able to keep enough stock on his farm without robbing the poor man of what little pasture the roads may afford, by turning at large his young stock, sheep, broken down horses, &c.

Mr. Michael Gillam was then elected for the next President. He chose draining for his subject.

New Durham, Ont.

Good Health.

WHAT TO DO IN CASE OF SUNSTROKE.

Now that the true nature of the disease is known, the method of treatment becomes most obvious, and we learn not merely what to do, but also what not to do. As heat is the cause of the symptoms, common sense points to the abstraction of the heat in some way as the mode of cure. And here again vivification comes into play. I have taken an animal, comatose, paralyzed by heat, apparently dying, and plunged it into a bucket of cold water. The temperature of the sufferer at once rapidly fell until it reached the normal point, and just in proportion that of the water in the bucket rose. As the animal cooled, its respiration became more regular, the unsteady whirr of the heart was stilled, by-and-by the eyelids were lifted, and out from the glassy eye came the beams of new life.

If the period of unconsciousness had been short, the animal was in a few hours apparently as well as ever; if long, the animal would recover sufficiently to recognize its surroundings and to struggle for release, but when allowed to escape, the paralyzed limbs and the slow, imperfect progression indicated the profound injury the nervous system had received, and in a few hours the animal would be dead. The lessons of these experiments are too plain to be overlooked. Whatever is to be done in this disease is to be done quickly. Clinical as well as experimental observation enforces this doctrine. There should in such cases be no waiting for the doctor. The remedy is so simple, the death so imminent, that the good Samaritan passing by should save his brother. The good Samaritan must, however, have a cool head to be useful. Not every man that falls unconscious on a hot day has sunstroke. There is, fortunately, one criterion so easy of application that any one can use it. Go at once to the fallen man, open his shirt bosom and lay the hand upon his chest; if the skin be cool, you may rest assured that, whatever may be the trouble, it is not sunstroke. If, on the contrary, the skin be burning hot, the case is certainly sunstroke, and no time should be lost. The patient must be carried to the nearest pump or hydrant, stripped to the waist, and bucket-full after bucket-full of cold water be dashed over him until consciousness begins to return, or the intense heat of the surface decidedly abates. —Dr. Wood.

Among the replies to an advertisement of a music committee for a candidate for organist, music teacher, &c., a vacancy having occurred by the resignation of the organist in office, was the following: "Gentlemen, I noticed your advertisement for an organist and music teacher, either lady or gentleman, and having been both for several years, I offer you my services."

Correspondence.

SIR,—When I ordered your agent to send me the ADVOCATE, I was about to leave home for four or five weeks. On my return home I was glad to find two numbers of your valuable paper awaiting my perusal, the contents of which I read with pleasure, and profit—too, the most interesting subject, to my mind, at the present time being the article on the potato-bug. During my absence from home I had formed my first acquaintance with this disagreeable and unweelcome visitor. As it was after dark when I arrived home, I had to wait till next morning to inspect my potato patch—a very promising crop of Early Rose. I expected to find them badly infested with the pest, but, like the soldier who goes to war, I was somewhat disappointed in not finding a single enemy to have a brush with, except two of the three-striped variety, which, if I have been rightly informed, does not injure the potato vine, but devours the eggs of the six-striped variety, and is consequently a friend instead of an enemy. Is this the case or not? Most people are killing both kinds, but I have decided to let the three-striped live till I hear from you as to their habits. After inspecting my potatoes, I went to my next neighbour to have a friendly chat for a while, and among other subjects I mentioned the potato-bug but was surprised to find he had never heard of it. Before I left, however, he got me to examine a few early potatoes he had in the garden, the only ones that were up. The bug was there in numbers, and larva in abundance. They were soon all frizzling in the stove. So much for the benefit for agricultural papers.

My neighbour is an intelligent Scotchman, and now that he is posted on the habits of this common enemy, he will wage a war of extermination against them. And now for the reason why my potatoes were clear and his infested with the bug on adjoining lots of land. On examining his potatoes I found that although he had grown fall wheat on the ground last year, it had previously been planted with potatoes; as there was a good many potatoes which had evidently remained in the ground from the previous crop, there would of course be some among the wheat last season, and from his ignorance of the existence of the bug, and the potatoes being among the wheat, they were allowed to bury themselves quietly last fall and resume operations on a larger scale this spring. Now, as to my plot of potatoes, I broke it up out of rod this spring, harrowed it, and planted the potatoes by hand in hills. No potatoes were near it last summer, and thus I account for their immunity from the pest, and my opinion is that while the bug remains with us, potatoes should not be planted in the same place two seasons, and that those who are clearing up land will save their potatoes by clearing a piece and leaving it surrounded with woods, and those on cleared farms should isolate their patch by ploughing a piece in the corner or middle of a sod field, and change the locality every year.

If you consider these suggestions worth anything, publish them. There is an old adage that an ounce of prevention is better than a pound of cure. If I live I will let you know in the fall whether my potatoes kept clear of the bug through the sea- or not.

I notice a letter from Jas. Beckett, of Artemesia, in which he wishes to know the difference between Baltic and Glasgow wheat. If they were growing on the same farm and he could see no difference, I am strongly of opinion it was all one kind of wheat, as there is a marked difference between them. The Baltic has a rather short but well packed ear, while the Glasgow has a long ear, with the grain far apart. The Glasgow ripens two weeks later than the Baltic, but is free from rust, while the Baltic is subject to rust when ripe. The Baltic is a larger and better grain than the Glasgow, and yields more to the acre, provided it does not rust. If you have not already answered Mr. Beckett's query, you may rely on this as perfectly correct. —M. HARRISON.

Shanty Bay, June 24th, 1872.

DEAR ADVOCATE,—I am a very poor scribe, but if there ever was a time when the farmer should speak for themselves it is now. The government asks if there should be a duty on United States corn? I say by all means. Not only on corn, but on all kinds of grain, for if a duty is put on corn alone, then they will send us oats, barley, buckwheat, and to partially take its place, tobacco and broom corn, which can be very successfully raised in

all the south part of Ontario. And I can see no reason why the raw material, as well as the manufactured, would not stand a tax. During the war, we raised both broom corn and tobacco, and could again if it would pay. Beef and pork should also pay duty, for they are the concentrated essence of corn, most especially western fed. As this country becomes cleared, the raising of winter wheat is more and more uncertain, because the snow drifts off and the wheat freezes out, so that coarse grain is our only hope. And if the price of them could be raised from twenty to forty per cent, we could employ more men and pay more wages, and if need be, pay more taxes, but your government tells us there is no fear of that. They have done a good thing in taking duty off tea and coffee. Now take it off sugar, and then tax the United States produce up to that point at which it will yield the largest amount of revenue, which is about the course they take with us.

I suppose I would be called a young farmer, but I have been at it for some twenty years, and I do think we have very little to encourage us if we did not do our work with our own families. In most cases it would not be done at all.

Now if these thoughts are of any use to you why correct and publish the matter with or without my name.

Respectfully yours,

W. S. HURD.

Craighurst, July 1st, 1872.

WM. WELD, Esq.—I have been requested by the Directors of the Medonte and Flos Branch Agricultural Society to forward you a copy of a Resolution passed by them:—

Moved by Mr. John Johnston, and seconded by Mr. Arthur Craig, That the Board of Directors of this Society tender their heartfelt thanks to Wm. Weld, Esq., editor and proprietor of the FARMER'S ADVOCATE, London, for his liberal prize of a very fine Berkshire boar, given as a prize for a club of subscribers sent by the above Society; and, further, that Mr. Weld has the well wishes of this Society in his valuable undertaking. Carried unanimously.

You will much oblige by sending me the amount of your account for papers ordered by me on behalf of the above Society.

Yours truly,

THOS. CRAIG,

Treas. M. & F. B. A. S.

P. S.—The Society requests that you publish the enclosed resolution.

SIR,—Being on a ramble through this portion of the Dominion, it occurred to me that a little description would not be amiss. This is a very flat country, with a fine range of hills in the distance. Chateauguay Mountains form the summit, of which a splendid view is to be obtained of the States and surrounding country. Further west in the county is another range of hills, from which (Cover Hill) there is a fine sight of Montreal and the River St. Lawrence.

The western townships, Hemmingford, Wroxham and Beavermeadow, are very stony townships; in fact, the stones appear to be a greater obstacle to rid than the trees. There is in some sections quite a number of pine and tamarac, and there are some good water and steam mill, about, busily employed converting it into lumber and shingles, for which there is a good demand. There are some nice villages about, and some very creditable looking houses in them. There appears to be a great want of a central railway, however, to tap this country, and excitement is pretty rife on the subject.

There are in some sections nothing but French Canadians. Their land appears worn out, crops meagre, and abounding with that conspicuous weed charlock, or wild mustard. Farmers tell me that wheat does not answer well. In some sections you see none, and it appears to be the aim to get enough to supply the household. Peas are little grown either, but oats and barley are extensively sown, and are considered to be looking extremely well in this quarter; but to me, an Ontario man, they look ordinary. Hay is a very good crop, and quality excellent. Buckwheat is grown largely in some parts, and appears to succeed well. Potatoes are excellent, and the potato bug almost unknown as yet. Dairying appears to be taken little notice of, and I think if more attention was paid to this, looking at the grassy nature of the country, it would answer better than other pursuits. Indian corn looks splendid. I notice that there are little or no attempts to improve the breed

of cattle. They are all of the old, original stock—no size or quality in them. There has been some fine showers, but it is yet dry and hot; more would be acceptable. Haying actively commenced.

Yours truly,

RAMBLER.

Huntingdon, P. Q., July 18th, 1872.

SIR,—I herewith send a receipt that may, perhaps, be of value to some of your readers: An excellent machine oil can be made by taking one-third hog's lard and two-thirds coal oil, and mixing them together. It does not gum like many oils I have purchased, and is good for sawing machines, or, indeed any other machinery. By changing the proportions, it can be made thicker or thinner to suit the requirements. I have used this oil for some time, and found it superior to any other. I do not think this is known or used by others. I desire no patent on it. Anyone can make it.

THOS. FORFAR.

Waterdown, June 20, 1872.

SIR,—Please find my subscription for the FARMER'S ADVOCATE. I believe my year is expired. I like the paper very much. I feel as if I could not do without it. It is just the paper for farmers. I have been trying to get subscribers for it.

JACKSON FOSTER.

Uffington P. O., July 8, 1872.

SIR,—I like the 'ADVOCATE' very much, and consider the price merely nominal compared with its real value, at least to us, who are only new beginners in farming and house-keeping. I do not like to read articles advancing the idea that anyone who is physically able for hard work can be a successful farmer, and making out that farming is the merest drudgery. Now I consider that a man amply qualified either for a professional or mercantile life can, if his tastes and inclinations be so directed, serve his God and his country as fully in this quiet, independent, original mode of life as in any other. At least I very far prefer it, and I glory in every step I can see it rise towards the preeminence it deserves.

Yours, &c.,

RICHARD WARREN.

Dunsfordville, July 8, 1872.

SIR,—I find the FARMER'S ADVOCATE indispensable, and consider it worth double the amount of the subscription to any farmer.

CHAPMAN PENNOCK.

Elgin, July 11, 1872.

SIR,—I think the FARMER'S ADVOCATE one of the best papers we get. For real worth it can't be beat. I think it should be in every family in Elgin.

Crops in general are very good here. Hay is above an average; fall wheat is pretty good in general. Spring grain wants rain. We have had a nice shower to-day, for the first time in four weeks. I sowed three acres last fall of the Scott wheat, and for the chance it had it has done well. I think it is better than either the Deihl or Tradewell. I hope your paper may still prosper. WILLIAM WALLACE.

Southwold, July 8, 1872.

EDITOR OF ADVOCATE, As I have had a little experience in trying to keep off the currant worm, I will tell you what I did. I shook dry ashes over the bushes while the dew was on, or if there was no dew, every third day I sprinkled the bushes. I have done so these two seasons. My bushes are thrifty, though my neighbors' bushes are all gone.

I see in the last ADVOCATE a long communication on the potatoes. This is how I raise potatoes:—In the Fall I plough stubble ground, and cultivate it in the Spring till planting time, when I mark out and plant in hills, three and a half feet apart. I then top dress with manure, and put plaster and ashes on before cultivating. I can get twice as many potatoes in this way as any other I have tried.

Spring crops look pretty well in this section, but suffer now from want of rain. Hay generally light.

I think your suggestion about forming a company to carry on the paper to advocate the farmer's interest is a good one. JOSEPH HILL.

Drummers Farm, Charlotteville, July 10, 1872.

MR. WELD,—As you desire information on agricultural subjects, I furnish you with the weight of wool taken from my sheep this season. I keep but ten breeding ewes, and from these I cut this Spring 152 pounds of wool, and I raised sixteen lambs. They were shorn the 2nd of May, 1871, and this year the 1st of May.

These sheep are of the Leicester breed, and I doubt if any imported stock will surpass them. I exhibited some of my sheep at the Western Fair in 1871, and was awarded the diploma, as having the best sheep on the ground, which all admitted to be right, but through some bad judgment or other, I only got the second prizes. Stock should carry off the prizes; not men.

Yours,
PHILIP BROOK.
Whalen, June 27, 1872.

SIR,—Crops in general are promising in this vicinity, except where destroyed by the bug. Some have ploughed up fields of peas that have been entirely stripped by these pests. As to the joint stock company for the FARMERS' ADVOCATE, anything you can do to extend the influence of that valuable sheet, should meet the warm approval of its readers.

SAMUEL SUDDABY.
Somerville, July 10, 1872.

SIR,—I ploughed a field in the fall of 1869, and ploughed the land all around the field in the fall and again in the spring, and sowed with oats and seeded it with clover, (the small kind) and I now have a large crop of grass on the field. The clover all around the field is two weeks later than the rest of the field, the land all being of equal quality and the seed the same. Will anyone be kind enough to give through the ADVOCATE some explanation of this.

HENRY BUCKNER.
Crowland, July 10, 1872.

and they will see crops that will astonish them. Sir William Logan inherits this estate from his brother, who formerly farmed it. Sir William's attention is wholly engrossed with his geological exploration and surveys. He appears an enthusiast. He is devoting his whole time and attention to a minute survey of the eastern townships. He is doing this at his own expense. We had the pleasure of an introduction to him. He is a very active old gentleman, being between seventy and eighty years of age. He has rented the farm to Mr. Thomas Irving, who owns the stock. Mr. Irving has for many years devoted his attention to Ayrshire cattle. His herd, as referred to, carried off the first prize at the Provincial Exhibition in Kingston, in 1872, and the first prize in Quebec in 1871. His bull, "Robie Burns," is a very fine animal. "Mountain Maid," the cow standing near the bull, is a favourite of ours. "Stately," the last one in the picture, with her head turned, is also a "bonnie beastie," to use the Scotch term. Mr. Irving is a lowland Scotchman, and has made rapid advancement in wealth and position since he came to this country. He is what is termed a canny Scotchman, and is well respected among Ayrshire

were in Montreal, and the Sprague mower, manufactured by M. Moody, of Terrabone, was the victor.

Emigration.

The wealth of our Dominion must, for some time at least, be estimated by the number of her people. Our natural resources are inexhaustible. Mines and minerals, rivers, bays, and inland lakes are all that can be desired to make Canada one of the first nations on the earth. Our great want is an increased population.—We need more men of unflagging industry and enterprise, more men from the good old mother country with skilled hand and brawny arm to develop the resources of our country.

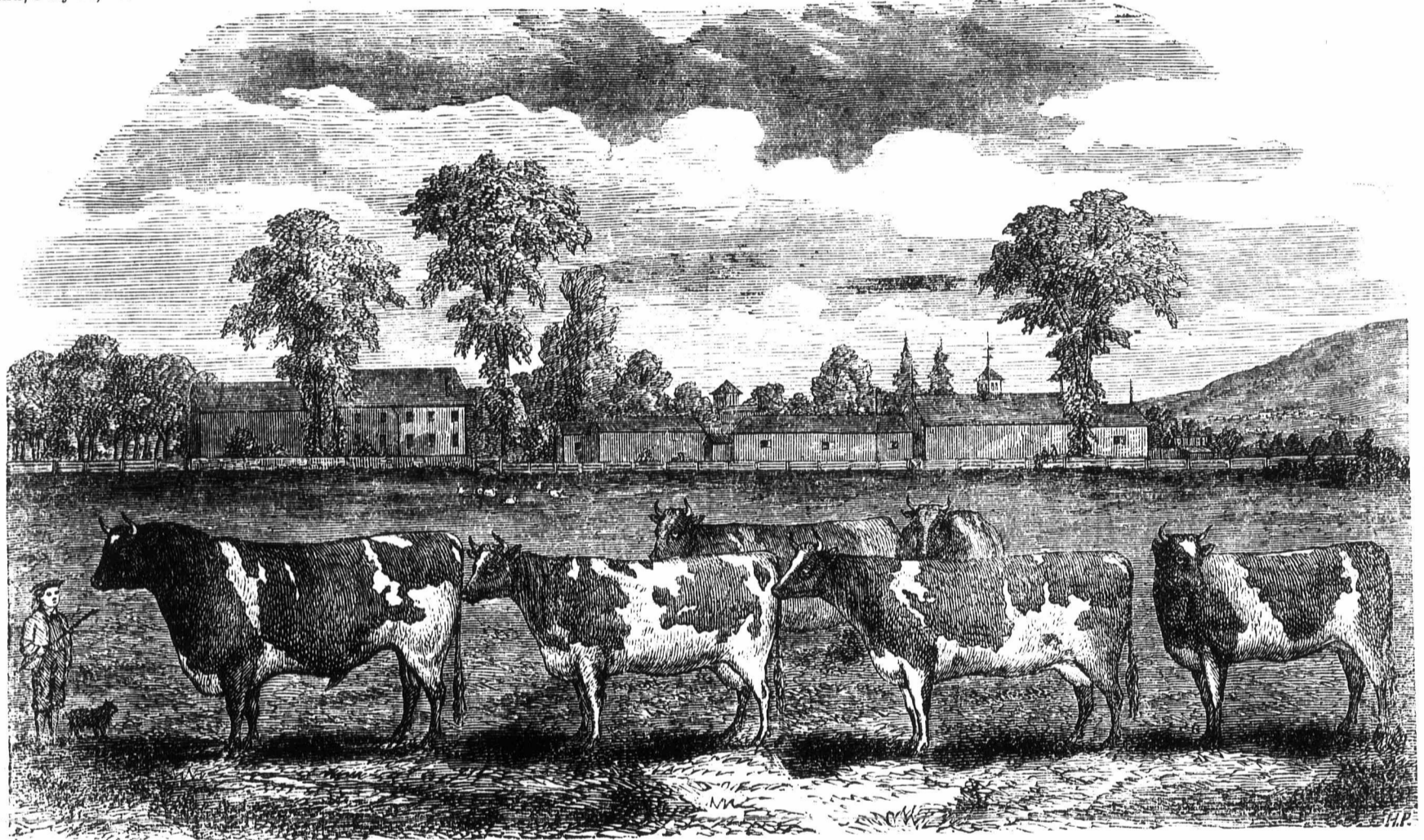
It is not enough to induce emigrants to come to Canada. Every reasonable inducement must be given them to remain in it; and by fostering the industrial pursuits, and by every means promoting the general prosperity of the country, to induce our own people to remain with us, and others to make Canada their permanent home. There is much sound judgment in the following remarks of the "Colonist Farmer," of Fredericton, N.B.:

deal with, and this is the reason why it is desirable that a number of applications should be made at one time, so that the nucleus of a settlement could at once be formed.

Other nations are doing all in their power to attract emigrants from Europe. The Empire of Brazil as well as the United States are offering large grants and free homes to colonists; and some of their agents are, we have reason to believe, endeavoring to depreciate the advantages of Canada that they may thereby the more effectually divert the tide of emigration to their own shores. From the St. John's "Telegraph," N. B., we give an extract of a letter from T. Potts, Esq., London:—

OBSTACLES TO IMMIGRATION.

In some of my previous letters I think I stated a few of the difficulties attending our mission, and gave you an idea of the notions of the people with regard to Canada. I did not tell you that another form of opposition has recently made its appearance, in the form of gigantic American Land Companies, who have taken to abuse Canada through the press, and publish passages derogatory to Canada in the pamphlets they distribute, and if Mr.



VIEW ON SIR WILLIAM LOGAN'S FARM, MONTREAL.

View on Sir Wm. Logan's Farm, Montreal.

THE PROVINCIAL PRIZE HERD OF AYRSHIRES, 1871 AND 1872—THE PROPERTY OF MR. THOMAS IRVING.

This farm contains nearly 200 acres of land, and is situated close to Montreal. The soil is of excellent quality, is well manured, thoroughly underdrained, and well farmed. This is one of the farms from which we have obtained seed for our western farmers. The sight of the crops on this farm would please anyone. The wheat, oats, hay and root crops are equal to the best we have seen in Ontario. Here we see as fine a piece of horse beans as we would see in England. Three and four acres are cultivated on this farm annually. Line hedges are here to be seen that will turn any stock.

Should any of our readers go to Montreal we would advise a visit to this farm,

breeders as being a good judge of this class of animals, and an excellent farmer. The scenery represents the back part of the farm buildings and a small portion of the house on Mr. Logan's estate. A part of the mountain from which Montreal takes its name is also shown. On the side of the mountain may be seen the residence of Sir H. Allen. The engraving is made by our old and favourite artist, Mr. Perrie. We hope to give the representation of more of our breeders' herds and farm scenes.

We write this hurriedly, as we are still on our tour, and hope to visit many more places during the season. We are obtaining information that may be of value to ourselves and our readers. We regret that we cannot devote as much time at each place as we should like to do, or visit as many as we would wish. Future numbers will contain more particulars about some of the farms and stock in this part of the country. A trial of mowing machines on this farm took place while we

The arrangements made by the Government for the reception of immigrants from Europe, naturally leads to the enquiry, if similar advantages were accorded to the young people of our own country, whether it would not be the means of a large number in other lands, making homes for themselves among us. We know that it has often been the cry that no encouragement is given to the sons of farmers, as well as other young men, to take up and settle upon the wild lands of the country. This may be true to some extent, and it is very easy to provide a remedy. There can be no good reason why equal facilities should not be given to every one, whether a native of this or any other country, and we are inclined to believe that should a number of young men assemble together for the purpose of settling on a location, they would find no difficulty whatever in obtaining land on conditions similar in all respects to those now being settled by the Danes. Isolated cases are difficult to

Thalir, the head of the Nebraska Land Company at Liverpool tells the truth, they are truly working on a gigantic scale. He told me a short time ago that their company alone had agents in every city and town in Great Britain, that they distributed 100,000 pamphlets a month, that they had three times as many agents, and were spending three times as much money as the whole Dominion of Canada. Nevertheless, in the face of all this, the immigration to Canada this year far exceeds any previous year, which ought to be accepted as a proof that the Dominion agents have not spent their time in idleness, and that the system inaugurated by the Hon. Minister of Agriculture has been eminently successful. In fact, I think the hostility of those land companies is a proof that the Dominion agents are being felt as a thorn in the side of the American land speculators. What share our Province is reaping of this increased emigration I am unable to tell.

The Immigration Report for one month

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gives a pretty good idea of the numbers making a new home in the Western world. Could we but retain the emigrants in Canada that come to it, and convince our people by facts not words, that the Dominion is the best home, we would do much for the prosperity of our Canada.

IMMIGRATION REPORT.

The returns for the month of June at the Immigration Depot are as follows:—English, 745; Irish, 210; Scotch, 370; Germans, 850; Norwegians, 900. Of these numbers it is estimated that 1,750 went on to the United States—namely, all the foreigners; the remaining 1,325 stayed in Canada. For the first six months of this year the number arrived at Toronto was 10,523; for the first six months of last year the number was 14,876; but it appears that a much larger proportion of the immigrants remained in Ontario this year than last. It is also stated that the demand for farm labor far exceeds the supply. Farmers, last week, were offering for hands from \$20 to \$25 per month, with board.

Jottings in our News-Room.

PROTECTION AGAINST MOTH.

We have every spring many modes offered of protecting furs and woollens against the destructive attacks of moth during warm weather. We have seen various preparations sold for this purpose, with long accounts appended of their being perfect remedies. Red cedar chests and closets are recommended, and many people clutter their houses with them at considerable expense, only to find out how grievously they have been disappointed.

The best protection we ever tried has been to tie up in close cotton bags all furs and woollens at all convenient to be so treated, after giving them a thorough shaking and cleansing, and letting them remain there until they are again wanted. These bags can be hung anywhere out of the way.

If there are no moths in the articles when tied up there certainly can none get in afterward if the bags are sound. All can see that. But when the clothes or articles are too numerous to make this convenient or desirable, hang up in the wardrobe, after a good shaking, and place little bags of camphor all over the wardrobe, laying a few in the bottom. Then, about every three weeks take out the clothes and shake them up well. No moth will ever disturb them.—*Cor. Country Gentleman.*

We find the following in an exchange: A standing antidote for poison oak, ivy, etc., is to take a handful of quick lime, dissolve in water, let it stand half an hour, then paint the poisoned parts with it. Three to four applications will never fail to cure the most aggravated cases. Poison from bees, hornets, spider bites, etc., is instantly arrested by the application of equal parts of common salt and bicarbonate of soda, well rubbed in on the places bitten or stung.

HOW TO BUILD BRICK CHIMNEY TOPS.

All the brick-work above the superstructure, whatever the material of the building, should be made with cement mortar, which absorbs less moisture than that made of caustic lime and sand. The bricks for a chimney-top should be soaked in water for a few minutes, so that they will not extract the water from the mortar. In order to have mortar become very hard, it must dry slowly. By laying wet bricks the mortar will set slowly, dry hard as the bricks. Every brick chimney should be covered at the top with a coping stone and arched top, or bricks placed over the flues, like the rafter of a building, for the purpose of turning off the water which would go down the inside, be absorbed by the bricks, and perhaps soak through and wet the paper or calomining on the inside. A chimney top made as above will stand the influences of the weather over a hundred years without repair.—*Industrial Monthly.*

OPPORTUNITIES NEGLECTED.

With all the characteristic energy of the people of this noble country, it is a remarkable and lamentable fact that the children of those who have raised themselves to social position and influence by their personal efforts, almost invariably waste what their parents accumulated. With superior advantages and a bright prospect before them to occupy a higher place than their prudent, persevering fathers, they fall by vice and dissipation into neglect and absolute nothingness.

Neglected opportunities is the sin of those who imagine themselves something, when at the end of a useless life, they discover themselves to be nobodies.

It is natural for parents to hope, pray, and labor for their children, with an ambition to leave them useful and prominent among men. But necessity alone develops power, and honest devotion in the steady pursuit of reputation above reproach secures what those who waste their opportunities never obtain—a good name.

In Siberia, during the winter, milk is bought and sold in a frozen state, and can be carried for a long period in a simple bag. When required for use, the requisite quantity is chopped off with a hatchet or sheath knife, and thawed as needed.

A condition powder, made of three parts salt and one of ashes, and given to horses at the rate of a handful twice a week, is highly recommended by the *Turf, Field and Farm*. If a little sulphur is added to the dose once a fortnight, it will be beneficial. The prescription is valuable for other domestic animals.

Mr. G. N. Lawrence describes, in the *Utica Weekly Herald*, his method of keeping white specks out of butter. He says:—Take a wire sieve, with meshes about right for sifting cornmeal, and put the cream through it, rubbing it with the hand, and no specks will appear in the butter or butter-milk. It will also take one-third less time to bring the butter.

BROOMS AND SWEEPING.

If brooms are wet in boiling suds once a week they will become very tough, will not cut the carpet, last much longer, and always sweep like a new broom. A very dusty carpet may be cleaned by setting a pail of cold water out by the door; wet the broom in it, knock it to get out all the drops, sweep a yard or so, then wash the broom again as before, and sweep again, being careful to shake all the drops off the broom, and not sweep far at a time. The water may need to be changed once or twice if the carpet is very dusty. Snow sprinkled over a carpet and swept off before it has time to melt and dissolve is also nice for renovating a soiled carpet. Moistened Indian meal is used with good effect by some housekeepers.

"HILLS ARE GREEN AFAR OFF."

The most flattering notices of the lands of Iowa and Nebraska have been industriously circulated throughout the Dominion, and in many of our country exchanges we meet with glowing advertisements of millions of acres for sale, at 10 year's credit, stating that the products will pay for the land and improvements within the limits of this generous credit. The bait has been sufficient to tempt some to leave Canada and go to push their fortunes in the West.

From two who have yielded to the temptation, and gone to the country that held out such delusive hopes, we give extracts of letters. They have found to their loss that hills that are green afar off may not be so bright when we are there:—

To the Editor of the Kelso Chronicle.

SIR,—I noticed in your paper of the 31st a paragraph headed "A Rare Country for Farmers," which proceeds to give a very rose-colored and rather misleading account of farming in Nebraska, a State which Yankee land-jobbers are extremely busy in pushing at the present time; and as there are generally two sides to every subject, I give you, as the opposite, extracts from two letters written by persons who were beguiled into that Western Eden. The first is from an experienced farmer, who writes:—

"We found no difficulty in taking up 80 or 160 acre lots and went to work and ploughed up a good share, each helping the other—it requiring the strength of three stout horses to each plough, the sod being so tough. The first year no crops can be put in; the sod is so much affected by the summer sun that everything sown on it would be parched up. May, June and July are the only months in which the prairie sod is ploughed; if tamed up at any other season it would not rot. We consequently had to wait eighteen months before we had any return for our labor. We then reaped about 17 bushels of wheat to the acre, which we were obliged to haul a distance of 200 miles to Burah's market, and then sell it for 60 cents per bushel.

"We were debarred from raising any stock, owing to the want of material to build fences. Our wood for erecting buildings we hauled from Sandy Point, on the Missouri river, a distance of 15 miles. It consisted wholly of cotton-wood, about six inches in diameter, for which we had to pay \$25 per thousand feet. From the great severity of the climate in winter, we could not use these wooden buildings for dwellings in the cold season, we consequently were obliged to follow the usual

custom of digging 'gopher-holes' in the ground, covering them over with prairie grass and earth, which formed our winter habitation five months of the year; sheltering the cattle in somewhat similar structures from which, they were not taken during the winter—hay, water, &c., being carried to them. Our fire-wood we got from the Missouri river, a distance of 15 miles. We paid nothing for it, but, as it was composed wholly of driftwood, it is yearly becoming scarce. My object in penning these lines is that they may act as a warning to farmers."

The other letter is written in, and dated "Nebraska City, February 7th," and address, ed to the editor of *Lloyd's Weekly News*, London, and states:—

"I have just received a copy of your paper of December 31st, 1871, and find in the column of 'Annals of the Poor,' a letter relating to Nebraska. I fully endorse all he has written, and can add a few more facts. I feel it my duty to do this, as I hear that many persons from England are expected here this spring; but what they will do when they arrive would puzzle a philanthropic lawyer to tell. There is not a single manufactory in the whole State—neither iron, coal, nor timber. Before I left England I corresponded with one of the Nebraska commissioners, who informed me that the climate was like England, and carpenters earned from 14s. to 20s. a day, and there was plenty of work, as the houses were mostly of wood. I did not expect to get a living without work, much less to pick up gold, but hoped by steady perseverance to gain a comfortable living; but bitterly have I been disappointed. I speak now from the experience of two winters and one summer. The winter here is fearfully cold—everything freezes in the house, including milk, bread, and even paraffine oil; blankets freeze on the bed at night; fat oxen, pigs, &c., freeze to death in their stables; human beings often meet the same dismal fate; many have been frozen to death this winter. The wind and snow-storms are also dreadfully severe. To work during the winter is next to an impossibility, even if there were any to do. In the summer the weather is intensely, oppressively hot. Everything has to be iced. There is scarcely any employment in the whole State; hardly any brick-work, for there is no brick earth. When there is a job for one carpenter, there are four or five waiting to do it, and the same with labourers. Wages also are not near as high as stated in England. Carpenters get from 8s. to 12s. a day; laborers from 4s. to 6s. a day. Farm produce—such as beef, pork, flour, corn, meat and potatoes is reasonable, because having no market here farmers are compelled to sell for whatever price they can get. House rent is very high; taxes also are high on land; furniture is also taxed, even to a chest of drawers; machinery and tools also. Woolen goods are very dear. Cotton fabrics are great value to English manufacture, and treble the price. Common tea sells from 5s. 6d. to 8s. per pound; sugar 7d. and 8d. per pound; matches, like our halfpenny boxes, sell for fivepence each; common ink penny bottles, fivepence; penny reels of cotton, fivepence. To sum up, we reckon the dollar (4s. 2d.) here goes as far as a shilling does in England. The people wanted here are those with plenty of hard cash to buy up land and business lots. If any man has plenty of money, nerves of steel, a constitution warranted to stand all climates, and last, but not least, an 'India-rubber conscience,' he may do very well here. Any one not possessing these qualities, had better stay away. (Signed)—EDWARD STORER."

I think that after reading the above, which is the other side of the subject, many will agree with me that Nebraska should be "a rare place for farmers" or other decent men to think of emigrating to.

Your obedient servant, West-Wiso. June 3rd.

Sales of Shorthorns.

The two "Dutchess" heifers for which Mr. Cochran paid 2,500 guineas in England, arrived at his farm, Hillhurst, Province of Quebec, where they produced two heifer calves which at less than a year old he sold, together with another "Dutchess" bull calf, to Lord Dunsmore, of Scotland—the heifers at 2,500 guineas for the two, and 800 guineas for the bull. They were shipped to England a few months ago. So much for our Canadian stock breeders.

Mr. Alexander, of Kentucky, has sold two Shorthorn heifers to an English purchaser for \$13,000.

Better Blood Stock for Middlesex.

Messrs. Reynolds & Beattie, of Westminster, have purchased the renowned Blooded Stallion "Harper." He has gained such reputation both in Canada and the States as to be well known. He is undoubtedly the best blooded stallion that has been owned in this country. He may be seen at his stables in Lambeth at any time.

Seed Wheat.

The Scott, Weeks and other wheats will be supplied at the Emporium at a small advance on cost prices. We commend the Scott wheat to those who have not yet tried it; it cannot but become in great demand when it is well known. 4-ounce sample packages, with head, sent by post on receipt of 20c. Fuller particulars respecting this grain next month.

Grasshopper Plague.

The farmers on the second and third concessions of Yarmouth, on what is called the Yarmouth Plains, are now suffering the most serious losses they have ever had to endure. They have been visited by a plague of grasshoppers, which swarm in millions on the land, and are devouring every growing crop. Mr. S. Smith has lost twenty acres of wheat, ten of barley, and the same of spring wheat. Mr. M. Burgess has lost ten acres of spring wheat, ten of barley, and his potatoes, ten acres, will probably be a total loss. Mr. Bannbury, on a farm of 200 acres, has lost the greater part of his crops, except his fall wheat. Other farmers have lost similarly; and in some cases even the leaves on orchards have been eaten off. These grasshoppers did considerable damage last year on the farms of C. Burgess and B. Wintemute; but this year they have so increased that they have had to enlarge their field of operations, till they now cover a circle two or three miles in diameter. They appear to be of a different species from any seen in this country before, as they often fly over barns and orchard, and can change their course when flying with apparently as much ease as a bird. If these grasshoppers deposit their eggs plentifully this summer, and if the eggs pass the winter uninjured by the frost, the farmers of Yarmouth, and probably Southwold, may expect to be visited next summer by a pestilence compared with which the Colorado potato bug is a mere trifle.—*St. Thomas Home Journal.*

[We gave notice of a remedy for these destroyers in this paper last year. It was to sow a strip of Larkspur by the side or through a field where they are numerous. It is said that the Larkspur is eaten by them, and is certain death. We would like to know if any of our subscribers have put the plan into practice; if so, we would like to hear the results. It is important that we should know how to destroy the numerous pests that prey on our crops.—Ed.]

Pleasant Paragraphs.

—Sambo, in speaking of the happiness of married people, said:—"Dat 'ar 'penis altogether how they enjoys themselves."

—Teeth extracted with great pains, is the rather ambiguous advertisement of a dentist.

—A class of men who will "knock down" all they can. Auctioneers.

—A man incarcerated in the toms has been fighting in chalk on the walls of his cell.

—"In New York city the spies of 342 churches, worth \$41,130,000, point heavenward. I'm here for stealing a loaf of bread for my starving child."

—"An ungallant contemporary thus writes:—"The modern woman, when she has a nail to drive, doesn't wait for her husband to come home. She catches hold of the nail as she would into the hair of a recreant s.n. swings the hammer over her head and plunges downward. Then she ties up her fingers as we as she can, puts on her best bonnet, and goes right over to her mother's for a good cry, and and her tea."

The Apiary.

BEE CULTURE.

At the late meeting of the Vermont Board of Agriculture, a paper on Bee Culture was read by O. C. Wait, Esq., of Georgia. Mr. Wait said honey sells higher than sugar and costs less. Ten good colonies will earn more than ten good men. Scientific care will be favorably. Bee-keeping may become as common here as in Prussia, and not only be a great source of revenue, but a common luxury. Mr. Wait gave many particulars of the history, management and habits of bees, not only of curious interest, but of importance to any who may choose to engage in the business. For 3,800 years the history of the bee has been intimately associated with that of the human race. He referred to the use of honey as food in the Scripture records. Though the bee is not made in God's image, yet many of their habits—neatness, industry, economy and government—may profitably be imitated by men. Every fruit grower and farmer should keep a few colonies of bees for the more perfect growth of his crops. They carry the pollen from flower to flower, and thus, while gathering honey, they spread the seeds of growth and multiply the fruit. Statistics were given by which it appeared that colonies would produce from five to two hundred and sixty pounds a season, which would average about 29 cents. He thought an average would be about 48 pounds. An investment of \$600 would yield about \$900. He said a single queen may become the mother of 560,000 bees. Bee-keeping ought not to be considered insignificant under these circumstances. It is easy, fascinating, and philosophical besides. Mr. Wait extended his figures, and showed by low estimates that it may be made more profitable than any other branch of our industry.

Bees are exceedingly susceptible of atmospheric changes; even the passage of a heavy cloud over the sun will drive them home; and if an easterly wind prevails, however fine the weather may otherwise be, they have a sort of rheumatic abhorrence of its influence, and abide at home.

SWARMS LEAVING THEIR HIVES.

One of the most vexatious things the bee-keeper has to submit to, is that of swarms leaving their hives. After being called from the field to live a swarm of bees, and losing an hour or so in hiving them, it is very provoking to find, a day or two after, that the swarm has gone, and the hive empty; forcibly reminding him of the statement in Holy Writ, "riches make themselves wings and fly away."

The old foggy beekeeper has no idea what made the bees leave the hive—he "just put them in the hive; the next day they were gone." By questioning him a little you will probably find that he put the swarm into a hive that had been standing in the sun, and very likely with cobwebs in it, then left it unshaded, and no wonder the swarm left. Or he may have used a cool clean hive, but after getting a majority of the bees in left them, supposing the remainder would follow, but the next day found the swarm gone. He probably did not get the queen in the hive, and the bees inside missing her, rushed out, and the queen with the outside bees followed, and so the swarm left.

Now there are a few things very necessary to be attended to, to make it profitable that a swarm will stay. The hive must be cool and clean; the swarm should be hived as soon as possible after clustering; every bee, or at least every cluster of bees, should be made to go into the hive; the hive should be well ventilated from below, and should be well shaded and kept as cool as possible. If a large swarm is hived during very warm weather, frequent syringing the hive with water will many times induce the bees to stay when they would otherwise leave.

No swarm can be reasonably looked upon as permanently located till it has been hived at least four days; by this time larvae are hatching from the eggs laid in a new comb which the bees are loth to leave.

But after the careful bee-keeper has attended to all the details mentioned above, a swarm will occasionally leave the hive—why it would be difficult to tell. With the frame hive a frame of young brood from another hive given to a swarm, will generally prevent its leaving.

A few years ago the writer was troubled exceedingly with swarms leaving the hive after

being hived; everything was done, as he thought, that could be done to induce them to stay. The hives were kept cool with plenty of ventilation, a frame of brood was given to hold them, but they would desert the brood; by using an entrance regulator which prevented the queen from leaving the hive with the dissatisfied swarm, many were compelled to remain.

A friend, after hearing the particulars, suggested whether the hives were not too new and fresh; no, they had been made some time, but the frame stuff had just been sawed, and that was probably the reason the bees took such a dislike to the hives. Since then he has had his frames put together some time before using, giving them a chance to lose the rank smell of newly sawed pine, and he has had no trouble with his swarms.—*Cor. Prairie Farmer.*

Veterinary.

THE HORSE.

THE CHECK-REIN.—Mr. Fleming, veterinary surgeon, says:—"I think nothing can be more absurd than check-reins. They are against reason altogether. They place the animal in a false position. The horse stands with a check-rein exactly as a man who stands with a stick under his arms behind his back when told to write. It is extremely cruel also. I have no doubt, if the public could only realize the fact that it throws away a large portion of the horse's power altogether, and is very cruel besides, this rein would be discontinued. It is not only the head that suffers, but from his head to his tail, from his shoulders to his hoof, and over his whole body, he suffers more or less."

Professor Pritchard, of the Royal Veterinary College, London, E., says:—"I would say that, instead of preventing horses from falling, the check-rein is calculated to render falling more frequent. Other not uncommon results of its use are, distortion of the windpipe, to such a degree as to impede the respiration ever afterwards, excoriation of the mouth and lips, paralysis of the muscles of the face, &c. It is a useless appendage, supported only by fashion. I feel that if this were more generally understood, numbers of excellent persons, who now drive their horses with check-reins, would discontinue to do so."

These testimonies of the injurious effects of using the check-rein are borne out by other eminent authorities on the subject. Thus the *London Horse Book* says:—"The horse is often prevented from throwing his weight into the collar by a tight check-rein."

The check-rein is, in nearly every case, painful to the animal and useless to the driver. * * * There is an important difference between a tight check-rein and a tightened rein, although not generally understood. The first is injurious, and cannot help the horse, while the latter is often useful. Because the latter is a steady support to the animal's head from a distinct and intelligent source—the driver; whereas the former is only the horse's head fastened to his own shoulders."

CLEAN AND DRY STABLES.—A horse will endure severe cold weather without any inconvenience, so long as he is furnished with a dry stable. But require him to stand on a wet and foul floor, and his health will soon begin to fail. Horses often suffer from cold feet and legs. A great many stables have damp and wet floors. Few men who handle horses give proper attention to the feet and legs. Especially is this the case on farms. Much time is spent of a morning in rubbing, brushing and smoothing the hair on the sides and hips, but at no time are the feet examined and properly cared for. Now, be it known, that the feet of a horse require more care than the body. They need ten times as much, for in one respect they are almost the entire horse. All the grooming that can be done won't avail anything if the horse is forced to stand where his feet will be filthy. In this case the feet will become disordered, and then the legs will get badly out of fix; and with bad feet and bad legs there is not much else of the horse fit for anything. Stable prisons generally are very severe on the feet and legs of horses; and unless these buildings can afford a dry room, where a horse can walk around, lie down, or roll over, they are not half so healthy or comfortable to the horse as the pasture, and should be avoided by all good hostlers in the country.—*Vermont Farmer and Recor.*

CRUMBS.

"You have only yourself to please," said a married man to an old bachelor. "True," replied he, "but you don't know what a difficult task I find it."

A near-sighted man being advised to use glasses, took four, he says, and saw double.

An Idaho invalid was ordered by a physician to take three ounces of brandy a day, and, knowing that sixteen drachms make an ounce, has patiently been taking forty-eight drinks a day ever since.

A Paris journal which stated that a prisoner under sentence of death had attempted suicide, first by poison and then by knife, and, medical assistance being promptly administered, added, "he is now out of danger, and will to-morrow undergo the sentence of the law."

A clergyman accosted by an old acquaintance of the name of Cobb, replied, "I don't know you, sir." "My name is Cobb," replied the man, who was about half seas over. "Ah, sir," said the minister, "you have so much corn on you that I did not see the cob."

Pawnbrokers and drunkards are always taking pledges. The former sometimes keep them.

The latest case of absence of mind is that of a young lady who, on returning from a walk with her lover the other evening, rapped him on the face and kissed the door.

The Wabash (Indiana) country has always been celebrated for the persistency and quality of its fever and ague. A local physician thus describes the genuine Wabash article:—"It comes creeping up a fellow's back like a ton of wild cats; goes crawling through his joints like iron spikes, and is followed by a fever which prohibits the patient from thinking of anything but Greenland's icy mountains. It isn't the 'every-of'er-day' kind, but gets up with a man at daylight, and sleeps on the small of his back all night. His teeth feels about six inches long, his joints wobble like a loose wagon wheel, and the shakes are as steady that one can't hold conversation except by putting in dashes."

We have all heard of the extreme fastidiousness of the female half of the Americans, and that they cannot bear to see the naked leg of a mahogany table; but it was paying a little expensively for the indulgence of that sentiment when, on a yachting excursion, a young lady who was on board sprang out of her berth and jumped overboard on hearing the captain, during a gale of wind, order the mate to haul down the sheets.

A fortune-hunter gives the following advice to husbands:—"Settle as much money upon your wife as you can, for her second husband, poor fellow, may not have a sixpence."

A gentleman in search of a man to do some work met on his way a highly-respectable lady, not as young as she once was, and asked her—"Can you tell me where I can find a man?" "No, I cannot," she replied, "for I have been looking for one these twenty years for myself."

It is common to speak of those whom a flirt has jilted as her victims. This is a grave error. Her real victim is the man whom she accepts. A happy simile runs thus:—"A coquette is a rose from whom every lover plucks a leaf; the thorn remains for her future husband."

"Fred," said a father to a son, "I hear that you and your wife quarrel and wrangle every day. Let me warn you against such a fatal practice." "Whoever told you that, father, was totally mistaken. My wife and I haven't spoken to one another for a month."

Mistress (to new housemaid): "Jane, I'm quite surprised to hear you can't read or write. I'm sure one of my daughters would gladly undertake to teach you." Maid: "O, Lor', mum, if the young ladies would be so kind as to learn me anything, I should like to play the pianer."

A Quaker who had been troubled with rats informs a friend that he greased a thirty-foot board, filled it full of fish-bones, set it up at an angle of forty-five degrees, and put an old cheese at the top. The rats went up, slid back, and he caught thirty of 'em the first night.

In New Hampshire, the following is posted on a fence: "Nottis know how is alloud in these medders, my men or women letten there kows run the rods, wet sets inter my medders aforeseed shall have his tail cut off by me, Obadiah Rogers."

A Yankee, being asked to describe his wife, said, "Why, sir, she'd make a regular fast, go-ahead steamer, my wife would—she has such a wonderful talent for blowing up."

Our sentimental friend having accidentally placed one of his No. 12 brogans upon an unsuspecting Colorado, laments in the following strain:
One more potato bug
Gone to his rest;
Stepped on so tenderly,
Cause it was best,
Poor little later bug!
Smashed to the dust,
In thy prosperity
Business has bust.

Land Poor.

BY ROBERT ROLLINS.

I've had another offer, wife—a twenty acres more! Of high and dry prairie land, as level as a floor. I thought I'd wait and see you first, as Lawyer Brady said, To tel how things will turn out best a woman is ahead.

And when this lot is paid for, and we have got the deed, I'll say that I am satisfied—it's all the land we need, And next we'll see about the yard, and fix the house up some, And manage in the course of time to have a better home.

WIFE.

There is no use of talking, Charles—you buy that twenty more, And we'll go scripping all our lives and always be Land Poor. For thirty years we've tugged and saved, denying half our needs, While all we have to show for it is tax receipts and deeds!

I'd sell the land if it were mine, and have a better home, With broad, light rooms to front the street, and take life as it come, If we could live as others live, and have what others do, We'd live enough sight pleasanter, and have a plenty, too.

While others have amusements and luxury and books, Just think how stingy we have lived, and how this old place looks; That other farm you bought of Wells that took so many years Of clearing up and fencing in, has cost me many tears.

Yes, Charles, I've thought of it a hundred times or more, And wondered if it really paid to always be Land Poor; That had we built a cozy house, took pleasure as it come, Our children, once so dear to us, had never left our home.

I grieve to think of wasted weeks, and year^s and months and days, While for it all we never yet have had one word of praise. Men call us rich, but we are poor—would we not freely give The land with all its fixtures, for a better way to live!

Don't think I'm blaming you, Charles—you're not a whit to blame, I've pitied you these many years, to see you tired and lame. It's just the way we started out, our plans too far ahead, We've worn the cream of life away, to leave too much when dead.

'Tis putting off enjoyment long after we enjoy, And after all too much of wealth seems useless as a toy. Although we've learned, alas! too late, what all must learn at last, Our brightest earthly happiness is buried in the past.

That life is short and full of care, the end is always nigh, We seldom half begin to live before we die; Were I to start my life again, I'd mark each separate day, And never let a single one pass unenjoyed away.

If there were things to envy, I'd have them now and then, And have a home that was a home, and not a cage or pen, I'd set some land if it were mine, and fit up well the rest. I've always thought, and think so yet, small farms well worked are best.

GUELPH HORTICULTURAL SOCIETY.

This Society has existed, we believe, for something over twenty years, and has maintained a continuous and uninterrupted vitality, not dying out every now and then, and standing up with a sort of spasmodic life, as has been the case with horticultural societies in places that boast greater horticultural advantages. We congratulate our friends on their enterprise and success, and the work they have done in disseminating a taste and love for choice fruits, fine vegetables and beautiful flowers.

Stump Machine Report.

Port Hope, June 24, 1872.

MESSRS. PLUMMER & SON, London.

GENTLEMEN:—I have sent by express to-day the amount of the account for the stump machine—say \$90.00; and for which you will please to send me a receipt for the amount. And I am happy to inform you that I like the machine very much; and I find that the two levers are a great improvement. The machine cost me \$12 to lay it down, and I did not receive it until the fourth of June, and since that she has pulled up 500 pine stumps.

Yours truly,
GEORGE MAXFIELD.

Sale of Short-Horns.

The auction sale of Messrs. John Snell & Sons came off on Thursday last, at Edmonton, when fourteen cows and heifers and two bulls were disposed of at fair prices. Mr. R. A. Babbage, of Dubuque, Iowa, was the principal purchaser; he carrying off eleven of the sixteen animals sold. He bought Knight of the Lodge, bull calf, for \$200; three yearling heifers, 4th Duchess of Solway, Eugenie, and Bitter Sweet, for \$250 each; two 2-year heifers—Josephine for \$325, and Lady Gray for \$260; and five cows—2nd Duchess of Solway, for \$375; Welcome, for \$320; Tillie Courtney, for \$330; Emma and calf for \$460; and Maid of Laprairie, for \$270. Mr. W. T. Benson, of Edwardsburgh bought Princess Louise, yearling heifer, for \$265; and Blanche, a 12-year cow, with her calf, for \$255. Mr. James Robson, Albion, bought 3rd Duchess of Solway, yearling heifer, for \$170. Mr. Robert Paterson, Owen Sound, bought Regina, a 12-year cow, for \$185. Mr. Lemon, of King, bought a 9-months' bull calf for \$100. The total amount of the sale was \$4,285.

We congratulate Messrs. Snell on the success of their truly patriotic undertaking. They have fairly gained an honorable name, not only for themselves, but also for Ontario, their adopted country. And with such men prosecuting their enterprise successfully, our Government thinks of entering into competition. They, too, (at least so they say) are to spend some thousands—we know not how many—in importing improved farm stock! We warn them against such a suicidal act.

A GREAT FARMER'S MAXIMS.

The successful life of Mr. Jacob Strawn, the prince of American farmers, he attributes to the close observance of the following maxims, originated by himself:—

When you wake do not roll over, but roll out. It will give time to ditch all your sloughs, break them, harrow them and sew them.

Make your fencing high, strong and tight, so that it will keep the cattle and pigs out.

If you have brush make your lot secure, and keep your hogs from cattle, for if the corn is kept clean they will eat it better than when it is not.

Be sure to get your hands to bed by seven o'clock—they will rise early by force of circumstances. Pay a hand, if he is a poor hand, all you promise him, if he is a good hand, pay a little more, it will encourage him to do still better.

Always ferd your hands as well as you do yourself, for the laboring men are the bone and sinew of our land, and ought to be well treated.

I am satisfied that early rising, industry, and regular habits are the best medicines prescribed for health.

When rainy or bad weather comes so that you cannot work out of doors, cut, split and haul your wood.

Make your racks, fix your fences, or a gate that's off its hinges, or weatherboard your barn where the wind has blown the sidings off, or fasten the roof of your house.

See to your interests wisely, and do not spend your time in electing presidents, senators and other small officers, or talking of hard times when spending your time in whittling store boxes, &c.

Take your time and make calculations. Don't do things in a hurry, but do them at the right time, and keep your mind as well as your body employed.

Miscellaneous.

An American writer gives to his countrymen the following advice in very plain terms. There may be some good hints in it even for ourselves:—

HARD TIMES AND THE CAUSE.

We are fast becoming a nation of schemers to live without genuine work. Our boys are not learning trades; our farmers' sons are crowding into cities, looking for clerkships and post offices; hardly one American girl in one hundred will do housework for wages, however urgent her need; so we are sending to Europe for workmen, and buying of her artisans millions worth that we ought to make for ourselves.

Though our crop of rascals is heavy, we do not grow our own hemp; though we are overrun with lads who deserve flagellation, we import our willows.

Our women (unless deceived) wear European fabrics; our men dress in foreign clothes; the toys which amuse our younger children have generally reached us from over the sea.

Hence it is that we plunge deeper and deeper in debt to the Old-World. We are like the farmer who hires his neighbor's sons to cut his wood, feed his stock and run his errands, while his own boys lounge at the grog-shop, playing billiards, and then wonders why, in spite of his best efforts, he sinks annually deeper and deeper into debt, till the sheriff cleans him out, and he starts West to begin again.

We must turn over a new leaf.

Our boys and girls must be taught to love labor by qualifying themselves to do it efficiently. We must turn out fewer professional and more skilled artisans, as well as food growers. We must grow and fabricate two hundred millions worth per annum, that we now import, and so reduce the foreign debt that we have so long and successfully augmented year by year.

We must qualify our clever boys to erect and run factories, furnaces, rolling mills, tanneries, machine shops, etc., to open and work mines, improve and fashion implements, and double the present product of their father's farm. So shall we stem that tide of debt that sets steadily against our shores, and cease to be visited and annoyed by hard times.—*Exchange.*

GENERAL MANAGEMENT OF WINDOW GARDENS.

Indoor plants naturally require more care than those grown in the open air, for nature supplies all the needs of the latter; but the secrets of successful growth and profuse blooming in the house are enumerated in the following few essential rules of management:—

1st. Give them plenty of light during the day, and darkness with a cooler temperature at night.

2nd. A good supply of fresh air, when the sun shines brightest and warmest; in mild days the upper sashes may be lowered a little, and the cool air will blow over the plants instead of directly upon them.

3rd. Perfect cleanliness, which is very important, for if the plants are covered with dust they cannot grow, and will frequently die; their leaves are their lungs; frequent syringing will keep the leaves moist and clean.

4th. A proper amount of moisture; a dry atmosphere is fatal.

5th. A good compost or soil, in which their roots can luxuriate and send forth vigorous branches, leaves and flowers.

6th. Get good healthy plants to start out with; plants that have been blooming all through the summer, or for several months previous will not do well; new ones are best, or plants that were used the previous winter, and have rested during the summer, will also answer, but in general it is best to get new plants.

7th. Keep only a few plants; too many in the window will make close crowding; pots should never be set two or three deep on top of each other.

8th. A uniform temperature of 60° to 70° in the day time and 40° to 45° in the night, should be steadily maintained.

9th. Different places should be provided for different plants. A sunny window with a temperature of 45° to 50°, will suit roses, geraniums, &c., best; Begonias, Coleus, Cissus discolor, want a still warmer place of 60° to 70°, and yet but little or no sun light directly

upon them. On the other hand, Heliotropes, and Boulevardias want all the sun possible, with a temperature in the daytime of 60° to 75°.

BEANS FOR STOCK FEED.—A Canadian farmer says, although white beans are of no value for fattening stock, yet they are the best things that can be fed to young animals, as they contain the necessary materials for making bone and muscle. For a young colt, one pint of beans and oats crushed together will be found much better than oats alone. A neighbor of mine, a few years ago, fed his store ewes with a regular allowance of beans and peas crushed, during the winter, and as a consequence the next spring never lost a lamb. They were so strong that they were on their feet and tried to suck almost as soon as they were dropped.

—A husband pleaded to a libel for divorce on account of cruelty that his wife, the libellant, spoke harshly to him and threw pillows at him, which resulted in dyspepsia. Divorce granted.

Useful Recipes.

DRIED APPLE PIES.—Wash the apples in several waters, then put them into an earthen dish or stone pot, and pour on rather more water than will cover them, for if the apples are good they will absorb a good deal of water and become twice as large by soaking. Never soak or cook fruit in tin or iron. A few hours should soak the apple sufficiently for cooking. If soaked over night they become insipid. Put them into an earthen pipkin or porcelain kettle, and cook in the water they are soaked in. If you like it, cut up a little dried orange or lemon peel, and stew with the apples, but they make it too sharp for our taste. Let them cook slowly till very tender. When they rise in the kettle, press them down gently, but never stir them. When perfectly tender, before taking from the fire, stir in a little butter—about one tablespoonful to a quart of cooked apple—and sugar to suit your taste. Season with very little nutmeg and cinnamon, if you do not use the orange or lemon peel; nothing else is needed if you do. Bake with an upper and under crust, but do not make the pie very thick with apples. Half an inch deep is sufficient. Dried plums and peaches may be prepared in the same way, but require no spice.

TO CURL FEATHERS.—The ribs are scraped with a bit of glass, cut circularly, in order to render them pliant; and then, by drawing the edge of a blunt knife over the filaments, they assume the curly form so much admired.

HARD GINGERBREAD.—Rub half a pound of butter into one pound of flour, then rub in half a pound of sugar, two table spoonful of ginger, and a spoonfull of rose-water; work it well; roll out and bake in flat pans in a moderate oven. It will take about half an hour to bake. This gingerbread will keep good some time.

GOOD WHITEWASH.—Take clean lumps of well burnt white lime, slackened; add to five gallons a quarter of a pound of whitening or burnt alum pulverised, half a pound of well boiled paste, and half a pound of cleanest glue, dissolved and boiled out in water. This may be put on cold indoors, but hot outside. It will be as brilliant as Plaster of Paris, and retain its brilliancy for many years.

PASTE THAT WILL KEEP A YEAR.—Dissolve a table spoonful of alum in a quart of warm water, and when cold stir in as much flour as will make it as thick as cream—mixing the flour in a separate cup so that it will not be in lumps. Add as much powdered resin as will lie on a dime; and throw in a dozen cloves to give it a pleasant odor. Put a teacup of boiling water into a tin dish, and pour in the flour mixture. Boil for fifteen minutes; if cooked in another pan of boiling water it will be less likely to burn. Let it dry away, and when needed, dissolve a piece in a little boiling water.

Horticultural.

CAN LAND BE MADE TOO RICH?

It can, in two respects: One is the loss of the interest in the investment; the other the disproportion between the soil proper and the manure added, the manure over-balancing it. Thus, in clear manure, crops cannot be raised. The exact proportion of manure in any soil, to give it its highest efficiency, it is difficult to determine. As soils differ so much, and as analysis is not satisfactory, test must be the reliance. An ordinary soil, long in use, principally by the plow, will bear a large amount of barnyard manure, which is the best that can be applied, as it contains all the ingredients of the plant. This mixed (of course thoroughly) with the soil, should be well rotted, so as to work more advantageously. If it makes the soil light, puffy, it will not do. Soil requires a certain degree of compactness, hugging the roots of the plant, and preventing its drying out. This is its mechanical quality, and is important. Having sufficient weight and compactness, we never have known land made too rich by barnyard or stable manure alone. In our practice with various amounts of manure of this kind, we have found this the experience. And this pays probably the best, as it gives the largest yields and the surest crops, with not an excess of manure, save only as it benefits the mechanical and other properties of the soil. Manure makes warm, attracts and retains moisture, mellows the soil, keeps it mellow so as to invite the air, and prevents the frost from acting so severely; and such land, with good drainage below, passes off the surplus water more readily—hence it is the land to withstand both wet and the drouth. All these are important properties, which the manure—barnyard manure—is the main agent in securing. Thus not only fertility is to be aimed at—there wants something considerable besides. It is not therefore a loss of interest to have a soil highly charged with manure, as high say as it will bear, a vice which to apply it would be no benefit; but rather a hurt, the point to guide us being that there is a sufficient proportion of clay and sand to give the weight and compactness necessary to the best condition of growth. But this wealth should not be carried too deep—only as far as necessary to a full root bed. This in trees and shrubs of course will require more depth, but then also less wealth. So the grasses need comparatively a thin layer, a few inches sufficing. The grains require perhaps a little more. Corn will do better with more depth, as in the deeply rich soil of bottom land. The same is the case with clover and with root crops. Wheat will bear six to eight inches. The same soil will not do for grass and for trees, nor for grain and a root crop—not but that the grain would do well, but it would do equally well on less depth. The best root crop we ever knew was one of carrots, where rotten horse manure (a heavy coat) was turned down to the full capacity of the plow. The weight of the growth was fully reached and fed upon. Had the upper part of the land been equally enriched, there would doubtless have been a still better crop.

I have never experimented in this respect with concentrated fertilizers, such as hen dung, human excrements, bone dust, &c., but I presume with a well balanced basis of clay and sand, a large quantity may be used to advantage where the soil has been badly run and is in a low condition. The growth here could unquestionable be made immense, with coarse, puffy straw and light berry; but even if a maximum crop of good quality could be obtained the expense would be too great to make it a paying operation. It would take years to get the benefit, whereas less manure would doubtless have realized the same yield. Thus there is no loss of the use of a part of the manure, as in our deep, rich soils of the valleys, which have depth enough to make several equal spreads of rich soil.

The rule as to the degree of fertility should be the greatest yield, quality being good. This necessarily requires a surplus over what is wanted for one or several crops. This is wanted to keep good the mechanical and other conditions of the soil. The point is to keep at the surface or where the roots are, and not waste by burying below. The proper texture (weight and compactness,) and a full maximum yield of good quality, should be the additional points held in view. Then whatever manure is applied will be of use immediately, and will work to advantage; there is nothing dead or dormant.

A test as to whether a soil has attained its highest efficiency will be found in the application of a special manure, such as bone dust for instance, ashes or lime, or any one or more soil ingredients. If these have an effect, it shows the soil has not yet reached its highest point of fertility. But in this test, all the necessary constituents of a properly balanced soil must be present. If all are present and to the full extent, any special manure will fail in augmenting the crop; it will rather hurt it.—*F. G. in Country Gentleman.*

THE GRAPE VINE IN SUMMER.

Perhaps the most serious difficulty to the vine grower—whether he has a single vine or a thousand—has to contend with is mildew.

The vines should be frequently washed, and if gray patches appear upon the under sides of the leaves, upon the stems of the bunches, indeed if they are found anywhere, apply sulphur immediately.

Flowers of sulphur is the form in which it is used, and it is best applied by a bellows. There are blowers and other implements in use, but a properly constructed bellows, such as may be had at the implement and seed stores, is the most convenient for applying it.

The application should be made on a dry day, and if the rain should wash away the sulphur soon after it is applied, the dust should be renewed. One, with a little practice, can so manage the bellows as to throw the sulphur in a fine cloud of dust, which will settle upon and cover all parts of the vine with an evenly distributed but almost imperceptible coating.

HORTICULTURE IN CANADA.

Notwithstanding the apparently unforbearing character of its cold climate and northern latitude, yet it appears there is a wide section in Canada West, where fruit culture is quite profitable, and the people are deeply interested in the subject.

New seedling apples of fine appearance and pleasant flavor received a prize, and stranger of all, several seedling peaches, out of a large collection by Mr. Cowherd, of Newport, near Brantford.

Several seedling plums and grapes were shown. Of Mr. Arnold's new varieties the preference seems to have been given to the Canada, ripe about September 15th, sweet, fine flavoured, free from pulp, but small in size.

[We give the above extract showing in the United States even the professed horticulturists are forced to believe that Canada and the Canadians can produce something worthy of notice. We know how the more discerning among our neighbors prize our northern apples, their fruit dealers every fall coming to buy them for their own markets at remunerative prices. Assr. Ed.]

CELERY, ITS BENEFITS.

Besides being a most delicious luxury and relish, aiding the appetite, celery has a good effect upon the nerves, and is a preventative of fevers and inflammations.

but is richer when grown in surface soil.—We wish to impress upon others the happy effects of its free use upon nervousness.

TO PROPAGATE PINKS.

In propagating pinks the young shoots of the season's growth should be cut off at the third or fourth joint, and at the same time remove the lower leaves and shorten those at the top of the shoots.

GRAPE VINES ON TREES.

Experience has developed one sound uniform information, viz.: That grape vines are more healthy and productive when allowed to climb upwards on trees or trellises, than if confined to stakes.

THE TOP DRESSING OF GARDENS.

As a rule manures rich in nitrogenous substances are more valuable than those rich in phosphates. The grasses have numerous roots, and these keep possession of the soil, so that they have more time to assimilate the fertilizing constituents there met with, as compared with some of the arable crops.

The absorption of the manure is very rapid, and the quick increase in the quantity of the grasses shows that they find a ready supply of the other constituents from the soil. Nitrate of soda is perhaps the best artificial manure for grasses, its effects being, however, much more marked in the case of the rye-grasses or the perennial or Italian than in that of the clovers, which are plants of slower growth, and require or do best with manures which are not so readily soluble.

One of my little friends wants to know what is the derivation of the word "Yankee." It is a corruption of the word "English." When the English first came to America the Indians tried to pronounce their name, but the nearest they could come to it was "Yengoes"; this afterwards led to their being called Yankees.

cleanings, should be all thoroughly mixed with the lime, which should be got from the kiln, a little water being added to make it, one cwt. of lime being given to every three cwt. of the waste material used.

Youths' Department.

UNCLE TOM'S COLUMN.

Well, youngsters, here we are again, to have a chat with you; and first, let's see what letters there are. T. C. Somerville, Chatham, James A. Potter, Berlin, and W. A. Furlong, Not-tawa, send correct answers to Anagrams 1 & 2, Poetical Anagram, Enigma and Acrostic.

THE RHYMING GAME.

One person thinks of a word, and gives a word that will rhyme with it; the players, while endeavouring to guess the word, think of those that will rhyme with the one given, and, instead of speaking, define them; then the first person must be quick in guessing what is meant, by the description and answers, if it be right or no, giving the definition to the question. Here are two examples:—

"I have a word that rhymes with bun." "Is it what many people call great sport or merriment?" "No, it is not fun." "Is it a troublesome creditor?" "No, it is not a dun."

"I've thought of a word that rhymes with sane." "Is it a native of Denmark?" "No, it is not a Dane." "Is it used by old gentlemen?" "No, it is not a cane."

I want some more letters from FARMERS' ADVOCATE children. I want you to aid me in the work of amusing others, and I want you to show that you take an interest in what is being done.

ANSWERS TO PUZZLES IN JULY NO.

ANAGRAM 1. Hark! hark! the dogs do bark, The tinkers have come to town— Some on nags and some in rags, And one in a velvet gown.

ANAGRAM II. There was an old doctor of Brille, &c. (Same as in June No.)

POETICAL ANAGRAM. Beneath a spreading willow, By the wide Pacific side, As I watch the rolling billow And the fast-receding tide, The evening sun is sinking Far behind the ocean's foam, While on days gone by I'm thinking, And my sweet Canadian home.

ENIGMA. The FARMERS' ADVOCATE. ACROSTIC.—July.

ENIGMA. My whole is composed of 13 letters. My 3, 9, 6 is a cooking utensil. My 2, 3, 7, 1, is what everyone feels in summer.

ACROSTIC. All the hay should now be in, Under cover, from the rain; Gladly now again begin Ushering in the golden grain. Soon the harvest will be done, Then we'll have some jolly fun. Battersea, July 1, 1872. J. LAWSON.

REBUS.



DEAR MR. EDITOR—It is a long time since your "old friend" has had an opportunity of writing anything for the ADVOCATE. I suppose she would be making some excuse now were it not that there are deeds being done almost daily which might and should be remedied.

This may seem a small matter to you, Mr. Editor, and other wise people; but to the little folk, and the writer, who was little herself not so very long ago, it is a matter of vital importance.

The writer fully appreciates the excruciating torture she underwent by being compelled to take a large humble bee off the window between her finger and thumb. My parent picked it up several times, and showed how to hold it so that it could not sting; but somehow the "critter" did sting me.

These few remarks—But I must stop wasting paper and ink now; only mind, don't frighten the little folk. INCH.

London Market—July 29.

Table with 2 columns: Grain type and Price per bush. White Fall Wheat, per bush. \$1 30 to 1 30. Red Winter Wheat, 1 25 to 1 25. Barley, 0 50 to 0 60. Peas, 0 50 to 0 60. Oats, 0 35 to 0 35.

Grain... Trains... GOING W... m.: and... GOING E... p.m.: 3... Mail Tr... Express... a.m.: Ace... Empon... Carter's... Patent S... Billington... Drill, 8... Two Row... One Row... Improve... Patent A... do... attach... Patent A... White's... do... Little G... Forfar's... Churns, ... Improve... Maple U... Double L... Walmsle... Iron Hat... Chaff C... from S... Gardiner... Cider Pr... Losee's f... Grant's... three p... Jones' f... farms... Mathes... Improve... rollers... Taylor's... from... Taylor's... made... Frase... carrying... Lamb's... Lockma... \$35... Gardiner... Gates' f... Excelsi... castles... prize... Simpson... Ont., D... \$125, if... ments 10... and adv... 15th of t... ing num... PRO... Agric... TO B... C... PERSO... and... appetite at Toro... viz.:... Horse... tural 1... 24th... Grain... Machin... ore Sat... Horti... Arts, &... Prize... entries... the Agr... tutes th... TORO... G... ONE... ab... shares... and ab... apply t... Lon ton... 8-11... POR... Catalo... 8

Great Western Railway.

Trains leave London as follows:—
GOING WEST.—12.50 p. m.; 5.25 p. m.; 2.45 a. m.; and 5.45 a. m.
GOING EAST.—6.00 a. m.; 8.40 a. m.; 12.35 p. m.; 3.55 p. m.; and 11.25 p. m.

Grand Trunk Railway

Mail Train for Toronto, &c., 7.30 a. m.; Day Express for Sarnia, Detroit and Toronto, 11.25 a. m.; Accommodation for St. Mary's, 2.45 p. m.

Emporium Price List for Aug.

Carter's Patent Improved Ditching Machine.
Carter's Patent Improved Tile Machine.
Patent Stump Extractors, \$50, \$75, \$100.
Billington's New Empire Nine Rowed Seed Drill, \$70.
Two Rowed Turnip Drill, with rollers, \$16.
One Rowed do do do \$10.
Improved Drills, for small seeds, \$5 to \$7.
Patent American 1-horse Cultivator, \$10.
do do do with plow attachment, \$10.50.
Patent American Garden Cultivator, \$7.50.
White's Improved Cultivator, \$12.
do do do with mould boards, \$14.
Little Giant Thresher, \$185.
Forfar's new Churn, Pride of the Dairy, \$4.50.
Churns, other varieties.
Improved Grain Crushers, \$30, \$35, \$40.
Maple Leaf and other Ploughs, \$5 to \$7.
Double Mould Board Plough, \$5.50.
Walmsley's Patent Potato Digger, \$18.
Iron Harrows, from \$18 to \$24.
Chaff Cutters on the most approved principles, from \$16 to \$50.
Gardner's Root Cutters, from \$25.
Cider Presses, single gear \$30, double gear \$34.
Loose's Patent Bee Hives.
Grant's Patent Excelsior Hay Forks, with three pulleys, \$12.
Jones' Amalgam Bells, for schools, churches, farms, &c., from \$10.
Matheson's Patent Washing Machine, \$10.
Improved Clothes Wringer, with indian rubber rollers, \$8.
Taylor's Patent Banglar and Fire Proof Safes, from \$35.
Taylor's Sulky Horse Rakes, \$35. The best-made common Sulky Rakes, \$30.
Fraser's Hay Car, \$9—the best appliance for carrying hay in the mow and in the barn.
Lamb's Patent Knitting Machine, \$33.
Lockman's Patent Sewing Machine, \$30 and \$35.
Gardner's Patent Sewing Machine, \$30 and \$35.
Gates' Patent Sewing Machine, \$35.
Excelsior Lawn Mower. This machine is the easiest to work of any made; it took first prize at Western Fair.
Simpson's Cattle Splice.

The FARMER'S ADVOCATE, edited in London, Ont., D.C. TERMS, \$1 per annum, if 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.

PROVINCIAL EXHIBITION!

of the Agricultural and Arts Association of Ontario,
TO BE HELD AT HAMILTON, ONT.
On the 23rd to 27th Sept., 1872.

PERSONS intending to exhibit will please take notice that the entries of articles in the respective classes must be made with the Secretary, at Toronto, on or before the undermentioned dates, viz:—
Horses, Cattle, Sheep, Swine, Poultry, Agricultural Implements, on or before Saturday, August 24th.
Grain, Field Roots, and other Farm Products, Machinery and Manufactures generally, on or before Saturday, Aug. 31.
Horticultural Products, Ladies' Work, the Fine Arts, &c., on or before Saturday, Sept. 14th.
Prize Lists and Blank Forms for making the entries upon, can be obtained of the Secretaries of the Agricultural Societies and Mechanics' Institutes throughout the Province.

HUGH C. THOMSON,
Sec'y Agricultural and Arts Association
Toronto, July 26, 1872.

Gardener Wanted.

ONE who will take charge of a market garden of about fourteen acres; one who will work it on shares is preferred. References as to character and ability will be required. For further particulars apply to W. WELD, Esq., of Farmer's Advocate, London, Ont., or to the undersigned.
A. A. BURNHAM, Jr.
8-st Coburg, Ont.

FOR SALE—Imported and Thoroughbred **AYRSHIRE STOCK**
Catalogues furnished on application.
N. S. WHITNEY, Montreal, P.Q., Canada

PROVINCIAL Ploughing Matches.

NOTICE is hereby given that it is the intention of the Council of the Agricultural and Arts Association of Ontario to hold Two Grand Provincial Ploughing Matches this Autumn, on such days as may hereafter be decided upon, subsequent to the date of the Provincial Exhibition, one in the Eastern and the other in the Western Section of the Province.
The sum of Four Hundred Dollars will be offered in prizes by the Association in each locality that may be selected. Implement manufacturers and others are invited to offer supplementary special prizes if they desire to do so. Tenders will be received up to 1st August of Fields, of not less than 30 acres of Land for each Match, the Eastern to be within 20 miles of Belleville, or between Belleville and Kingston, and the Western within 20 miles of London, if practicable. Full particulars will be published hereafter.
HUGH C. THOMSON,
Sec'y Agrl. & Arts Association.
Toronto, June 27, 1872.

MONTREAL Veterinary College.

In connection with the Medical Faculty of McGill University, under the patronage of the Council of Agriculture, P. Quebec
ESTABLISHED 1866.
THE curriculum extends over three sessions of six months each, and embrace the following:—
Veterinary, Anatomy and Dissection, D. McEachran, M.R.C.V.S.
Institutes of Medicine, W. Fraser, M.D.
Chemistry (Theoretical and Practical), R. Craik, M.D.
Veterinary, Medicine, and Surgery, D. McEachran, M.R.C.V.S.
In addition to the above, each student is required to take a course on Botany, by Professor Dawson. Lectures will commence on Tuesday, 10th Oct., at 5 p.m., and will be continued daily till 1st April. Dissection will commence about the 20th of Oct. Each student is required to dissect the whole subject during the course.
Three sessions of regular attendance on all the classes are required to qualify a pupil for examination.
The infirmary accommodation, and facilities for practical instruction, have been very much improved, and the varied and extensive practice of the College afford an excellent opportunity of obtaining a thorough knowledge of the Science.
Pupils of this School have the privilege of graduating at the Edinburgh Veterinary College, and the Royal College of Veterinary Surgeons.
A few Bursaries will be granted by the Board of Agriculture, to young men, residents of the Province of Quebec, enabling them to attend free. Application to be made to the Secretary.
For further particulars, apply to
D. McEACHRAN, V.S., 479 Craig St., or to
GEORGES LECLERE,
Sec., Council of Agriculture.

W. BELL & CO., GUELPH, ONT.



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FARMERS! See This.



THE Subscriber takes pleasure in announcing to the farmers of Ontario, and to the public generally, that he is manufacturing a large lot of his celebrated **Older Mills and Presses**, and calls special attention to his improved Mill of 1871, which is the easiest-working Hand Mill that is made.
Also his Improved **Straw Cutter, Corn Shelter, Grain Crusher, and Two Horse Powers.** They are just the articles that every farmer should have. I offer them all very cheap, as I have them Simplified, Improved and Patented, and machinery adapted to their manufacture. Give me your orders and save 40 per cent. of your money. For particulars send for Circular. Great inducements to the trade. Address—H. SELLS, Vienna, Ont. London Agent—W. Weld. Implements supplied at manufacturers' prices.

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THE subscriber offers a few choice animals of the **BEST BREEDS**, male and female, from **IMPORTED STOCK** of the most approved strains. Catalogues on application. M. H. COCHRANE, Compton, P.Q., Canada.

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Plans given, selecting, arranging and planting fruit and ornamental trees. Address—8-st TORONTO and BARRIE

THE ANNUAL EXHIBITION of the East Riding of the Co. of Northumberland AGRICULTURAL SOCIETY,

Will be held in the **VILLAGE OF WARKWORTH.**
In the township of Percy, on the 3rd and 4th days of October, 1872. By order
R. T. HURLBURT, Sec.



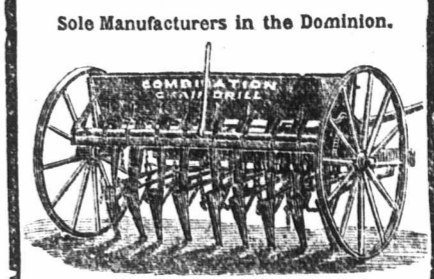
NORTH-WEST TERRITORIES.

AFTER the 25th of June next emigrants will be sent to Fort Garry at the following rates:—
TORONTO TO FORT WILLIAM.
Adults, \$5; Children under 12 years, \$2.50; 150 lbs. personal baggage free. Extra baggage, 5-cents per 100 lbs.
FORT WILLIAM TO FORT GARRY.
Emigrants, \$15; Children under 12 years, \$8; 150 lbs. personal baggage free. Extra baggage, 42 per 100 lbs. (No horses, oxen, wagons, or heavy farming implements can be taken.)
THE MODE OF CONVEYANCE.
By Railroad from Toronto to Collingwood or Sarnia.
By Steamer from Collingwood or Sarnia to Fort William.
By wagon from Fort William to Shebandowan Lake.
310 miles broken navigation in open boats, from Shebandowan Lake to the North-West Angle of the Lake of the Woods.
35 miles by Cart or Wagon from North-West Angle, Lake of the Woods to Fort Garry.
Between Fort William and Fort Garry, huts and tents will be provided for the accommodation of Emigrants on the Portages. Passengers should take their own supplies. Provisions will, however, be furnished at cost price at Shebandowan Lake, Fort Frances and the North-West Angle, Lake of the Woods.
THROUGH TICKETS TO FORT GARRY VIA FORT WILLIAM
Can be had at Toronto, at the stations of the Northern, Great Western and Grand Trunk Railways.
Emigrants are requested to take notice that packages are limited to 150 lbs. weight for convenience of transport on the portages, and that baggage and supplies must not exceed 450 lbs. for any one emigrant.
After the 1st day of August next, the **RED RIVER ROUTE** will be in a condition to admit of the transport of heavy articles.
By direction, F. BRAUN, Secretary

T. CLAXTON,

DEALER in all kinds of **MUSICAL INSTRUMENTS.** Brass Bands supplied with new or second-hand Instruments, at from One Hundred to Two Hundred Dollars per set of from ten to twelve pieces. Brass and Brass Side Drums, Musical Instruments of all kinds Tuned and Repaired.
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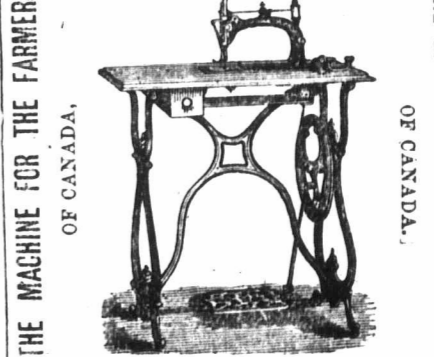
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We would call the attention of agriculturists to the following machines manufactured by us:
The Ohio & Champion Combined Mowing & Self-Rake Reaper
Johnston's Single Self-Rake do.
Wood's Jointed-Bar Mower
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Pitt's 8 & 10 Horse-Power Threshing Machine
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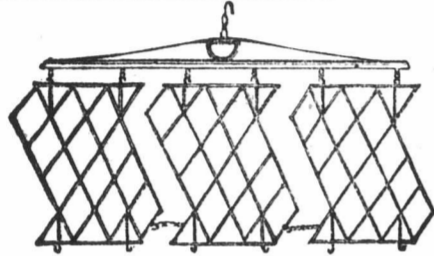
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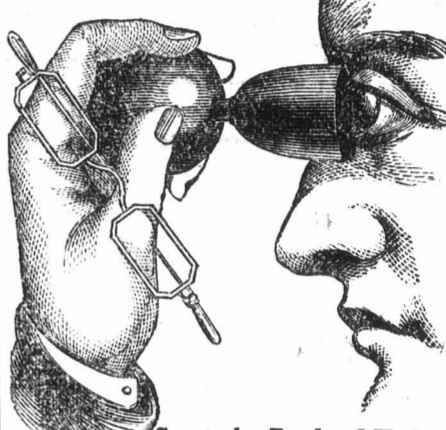
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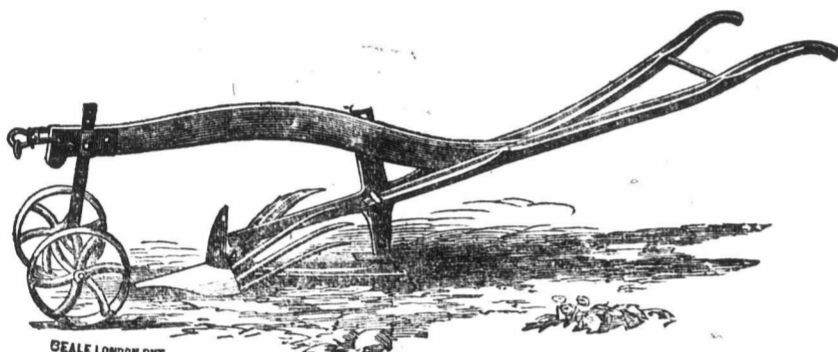
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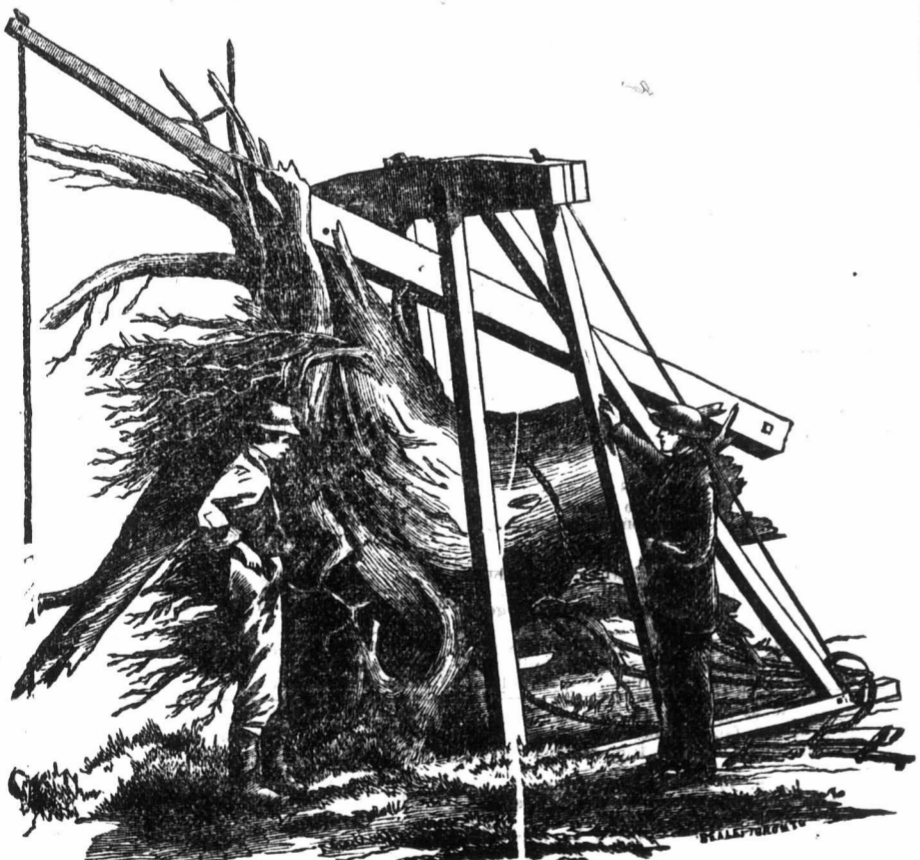
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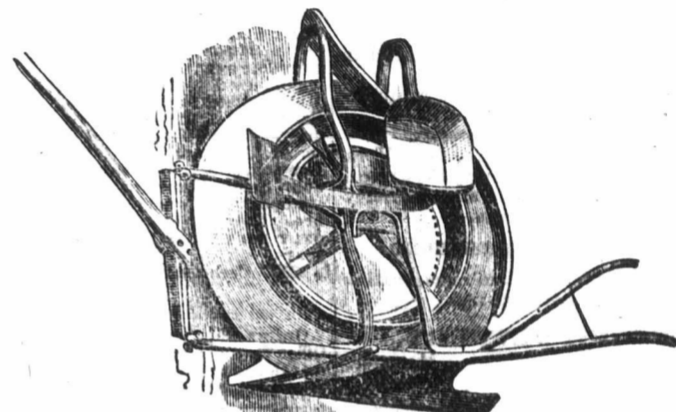
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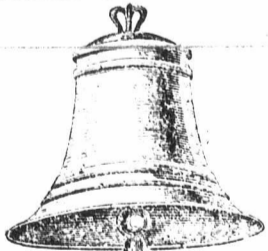
It is the finest Condition Powder in the World FOR HORSES.

It fattens Cattle, Sheep, Hogs and all animals. It gives a relish to the coarsest Food.

It fattens Cattle in half the usual time, and at a great saving of expense.

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Wholesale by G. GARLICK, 138 St. James Street, MONTREAL. 11-1871 W. WEID, Agent, London.



MARKHAM BELL FOUNDRY.

Table listing various bell models and their specifications, including diameter, weight, and price.

There are about 1800 of the above bells now in use and giving the best of satisfaction, costing only one third the amount of ordinary bells, and are all warranted one year.

FOR SALE. THE THOROUGH-BRED JERSEY BULL, "DANDIE," 3 years old, highly commended at Provincial Fair last year. Price \$125.—Address JOSEPH LAWRENCE, Kingston, Ont.

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- List of land parcels for sale, including No. 1-Township of Grey, Co. of Huron, 176 acres, mostly cleared, good frame buildings, 16 miles from Seaford; No. 2-Township of Simcoe, 100 acres, 3 1-2 miles from Wilkesport; No. 3-Township of Simcoe, 200 acres, 14 miles from Sarnia, well timbered, 1,600 dollars; No. 4-Westminster, 100 acres, 8 miles from the city, 80 acres cleared, good fruit section, 3,800 dollars; No. 5-West Zorra, 50 acres, very snug place, 6 miles from Woodstock, good land, every convenience, 2,400 dollars; No. 6-Bayham, 121 acres, 95 cleared, 8 miles from Tilsonburg Station, excellent buildings, well watered, 3,500 dollars; No. 7-Lobo, 50 acres, 45 clear, brick house cost \$1,350, good land and every convenience, 3,000 dollars; No. 8-London Township, 50 acres, 6 miles from city on gravel road, 25 acres cleared, good land and conveniences, 2,200 dollars; No. 9-Township of Blandford, Co. of Oxford, 400 acres, 6 miles from Woodstock, good water, 12 dollars per acre; No. 10-Euphenia, 100 acres, 70 clear, 3 miles from Newbury Station, 1,000 dollars; No. 11-Glenoe, 100 acres, 4 miles from Glenoe; price, 1,600 dollars; No. 12-Nissouri, 100 acres, 70 cleared; plenty of cut timber; clay loam; creek and well; young orchard; frame house, etc.; clear deed, 3,700 dollars; 10 miles from London; No. 13-60 acres, 7 and a half miles from London on gravel road; good clay loam; well, creek, and orchard, 5,000 dollars; No. 14-600 acres within ten miles of this city, 25 dollars per acre; No. 15-two hundred acres, ten miles from this city, 30 dollars per acre; No. 16-One hundred acres, four and a half miles from London, \$5,500; No. 17-One hundred and twenty acres, four and a half miles from Glenoe, \$9 per acre—all woods, 7 1/2 timber will more than pay for the lot; No. 18-Six hundred acres, within 11 miles of London, \$15 per acre. Must be sold within ten days; No. 19-Metcalf, 220 acres, 180 clear; frame house, barn, sheds, splendid orchard; brick Cheese Factory; light clay land; hard wood, 2 1/2 miles from Stratford; \$10,000. Easy terms; No. 20-London, 100 acres, 70 clear; hard wood; frame house and barn; orchard; spring creek; clay loam; 4 miles from city limits, near gravel road; 3000 dollars; No. 21-North Dorchester, 100 acres, 60 improved; house, barn, root-house; on gravel road, 10 miles from London; \$3500 dollars; No. 22-London Gore, 50 acres, 35 clear, clay loam; house and barn; orchard, good springs; 7 acres fall wheat; 4 1/2 miles from city; 2000 dollars; No. 23-Caradoc, 95 acres, 60 clear; frame house and barn; orchard; good wheat soil; 3 miles from Komoka; 2000 dollars; No. 24-Peel, Wellington Co.; 50 acres cleared; house and barn; well watered; 1650 dollars; terms easy; No. 25-Dorchester, 100 acres, 65 clear; house, barn, orchard; well watered; lightish land; 3000 dollars; No. 26-Dover East, 100 acres, 40 clear; 2 houses, barn, small orchard; 1 1/2 miles from shipping port; 1000 dollars; easy terms; No. 27-London Gore, 57 acres, 40 clear; house, barn, good water; Lenny Land; easy terms; No. 28-Osprey, 100 acres, 12 clear, hard wood, well watered; new frame house; 1600 dollars; No. 29-Houghton, 100 acres, well wooded; \$460; No. 30-London Gore, 30 acres, clear, finely cultivated; 3 miles from London, 1 mile from gravel road, \$1850; No. 31-Delaware, 95 acres, 85 clear; brick house, first-class farm buildings, 3 acres of orchard; a frame house, rents for \$8 per month; good spring; on gravel road, 10 miles from city, \$2800; No. 32-Jore of Leno, 50 acres, mostly clear, good bush near gravel road, close to city, excellent land, \$2,500; No. 33-Ashfield, Huron Co., 158 acres, good loamy land, beech, maple, hemlock; no clearance; spring creek on stage road, 18 miles from Goderich; cheap, 1500 dollars; No. 34-Delaware, 95 acres, 80 clear. Beech, Maple, Oak. Frame house, barns and stables, orchard, good water, excellent soil, 8 miles from London; close to churches and schools; a good chance; \$ 000. Terms easy; No. 35-Flamboro, 150 acres, 125 clear; maple, beech, and some pine; superior soil, good buildings, with every convenience; 15 miles from Hamilton, \$20 per acre; No. 36-Delaware, 50 acres, all clear, sandy loam, clay sub-soil, well fenced, good spring; on gravel road; no buildings; 10 miles from London; \$2000, easy terms; No. 37-London, 40 acres, 32 clear, good soil, spring creek, brick and frame house, barn, stable, orchard; on gravel road; an excellent place; \$2200; No. 38-Delaware, 30 acres; good brick cottage and stable, 3 sheds, 2 frame barns, granary, large and fine orchard, on gravel road; a capital place, \$4000; terms easy.

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TIMOTHY and CLOVER SEED: all KINDS of FIELD SEED, TURNIP, MANGEL, &c. &c. imported direct by themselves, and of the very best quality.—LAND PLASTER.

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