

FARMER'S ADVOCATE

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THE FARMER'S ADVOCATE

Home Magazine.

WILLIAM WELD, Editor and Proprietor.

The Only Illustrated Agricultural Journal Published in the Dominion.

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The Month.

The past month—we may say the past two months—have been unequalled in the annals of our country for the rapidity with which prices of all farm products have risen in value. The most remarkable has been the rise in cheese; two months ago it was a drug at from 5 to 7c.; last week it was in great demand at from 12 to 14c. When the dairy interest was at its lowest ebb we advised our readers not to abandon the business, but to continue, and prices would be sure to rise. But some factories ceased to make, and now they regret the abandonment of the business which has lately been paying so well.

One of the causes of the great advance in the price of cheese may be attributed to the great drouth that has continued in all the dairy districts of the United States. While our dairymen have been enriching themselves the American cattle have lacked food and water, and therefore their usually large production must be very materially diminished, and ours increased by the most favorable season for grass that we have had for some time. It is certainly very remarkable. See X. A. Willard's article on the crop reports.

We never had a finer autumn for a luxuriant growth of grass. The weather has been so unusually fine that all kinds of live stock have taken on flesh and fat at a rapid rate, and all must now be ready to go into the shambles or into winter quarters in fine order. This fine growth of grass must tell, not only on our present stock that is ready for sale, but more particularly on the meat crop of next year. If our farmers will only keep them thriving during the winter, as they should do, they will make more profit next season from

beef, mutton and pork than they have ever previously done. We repeat—don't sell your young stock if you can possibly keep them growing well.

WHEAT.

Sell, sell, sell! is our advice now; the price is good and it is highly remunerative; do not hoard it in your granaries. There are some farmers who say when wheat is low: "I want a dollar." Now some say they want two dollars. Perhaps they may get it but the chances are, in our estimation, that the price is just as likely to fall as to rise, in fact more so. Speculation in everything is now reigning. The present we think is the right time to sell. A drop may come and most likely will; you may depend it will catch some greedy farmer with his wheat in his barn and his cheese on the shelves. Now the prices are good the holder runs ten times more risk in holding his crop than when they are low. The largest exporters of wheat that we know do not hold one bushel in their own names this day; they would not invest a dollar in it now; they will only purchase to fill orders that are sent. They have shipped many hundreds of car-loads this fall already, and they are in a better position to know the prospects; they have telegrams several times a day. Still some farmers who sit by the fire and read nothing think they know better than such men, and still hold on to their produce. If you think you can view the situation of Europe, Asia and Africa better than European capitalists, or if you can command money at a lower rate of interest than they can—then, and not till then, will you be justified in holding your crops in speculation when they bring such high prices as at this time. Hitch up your team and take out another load before the roads get bad and winter rates of freight set in.

WINTER WHEAT.

The beautiful weather has given the winter wheat an unusual rampant growth—so much so that some have cut the tops of the wheat with the mowing machine; most farmers have their stock on the wheat to eat it down. If you have not topped yours, and it is rank, put in all the stock you can while the ground is dry, or even when the ground is frozen sufficiently to bear the stock. Do not let your stock eat too much of it at first; it will be apt to scour them if you do, perhaps bloat them. The root has now a good firm hold in the ground; that is all it wants for the winter; it will make top enough in the spring. We think it safer to have the top taken off too close than to leave too rank a growth on it for the winter.

One of the best farmers in Markham township accosted us when in Toronto at the Exhibition time. He said he liked the *ADVOCATE*, but he did not agree with us in our advice to farmers to sow the fall wheat late; he always liked to have his in early. In this locality many fields are affected more or less by the Hessian Fly. Some fields, we

are sorry to say, have been plowed up and re-sown, but we are glad to say, as far as our observation goes, they have invariably been fields belonging to non-subscribers, and have all been sown early.

There has been an unusual breadth of winter wheat sown this year. The Hessian Fly no doubt will reduce the yield of some pieces from what it would be if not attacked; notwithstanding the injury that may be done by this pest, from the present prospects we should estimate that there will be much more winter wheat to market next autumn than we have ever had before. The Russian war cloud that has been looming in the horizon for some time has no doubt stimulated the present prices; should that cloud disperse, down go the prices. It is estimated that the surplus crop raised on this continent this year is more than sufficient to supply the great deficiency in Europe. There is also a larger surplus in our Australian colonies than ever before; they will now ship to Europe. Corn is a great crop this year; it will be used in the place of wheat more than ever before.

APPLES.

We have had a fine crop of apples this year, while the British crop has been a very poor one. Immense quantities have been shipped and good prices realized; good prices will still be realized for good apples in good condition. Some fruit-growers may obtain a higher price by holding, but the chances are much against a good profit being made in late shipments. The unusual warm autumn weather must have impaired the keeping qualities of our apples. They will decay much sooner, and there most probably will be a heavy loss in apples that are kept this season. Now the prices are good, and while your apples are sound sell them. There are plenty of experienced buyers and also lots of speculators operating. Get your money in your pocket and let some other person run the risk of keeping apples this year. Still, we believe that apples will bring a good price later in the season.

INTERNATIONAL DAIRY FAIR AT NEW YORK.

The Exhibition will be opened to the public December 8th, at 6 o'clock a.m., and thereafter daily for two weeks. Exhibits from all parts of the United States, Canada and Europe are invited, and entries may be made any time before Dec. 6. Blank applications will be furnished gratis by writing or sending to the General Superintendent. Of the premiums offered in which the Canadian manufacturers may compete are—Dairy butter, for the best made in Canada, 1st prize, \$50; 2nd, \$25; 3rd, diploma. Sweepstakes, for the best butter of any kind, made at any time or place, 1st prize, \$100; 2nd, \$90; 3rd, \$80; 4th, \$70; 5th, \$60. Cheese—For best cheese made in the Canadas, 1st prize, \$50; 2nd, \$35; 3rd, diploma. For the best fancy shapes made anywhere, 1st prize, \$50; 2nd, \$25; 3rd, diploma. Sweepstakes, for best cheese made anywhere, 1st prize, \$100; 2nd, \$90; 3rd, \$80; 4th, \$70; 5th, \$60. Special premiums, offered by Nicholas Ashton, Liverpool, for the best lot of butter (if creamery, not less than 200 lbs., and if dairy not less than 50 lbs.) salted with Ashton's factory filled salt, made in New York, New Jersey, Philadelphia and Canada, prize \$75.

English Letter, No. 7.

[FROM OUR OWN CORRESPONDENT.]

Liverpool, Oct. 4.

It is said that rats leave a sinking ship; but it would appear that, for some good reason or other, the literary rat, whose squeaks from Toronto find their way so regularly into the pages of the *Mark Lane Express* and some other English papers, clings still to the country which, if he is to be believed, is the most unmitigated failure in the shape of a country and a field for emigration, of monied or other classes, under the sun. It would be too bad to suggest that it pays, and yet there might be something in such an idea. There may be here and there a journal with an eye to originality, and a desire to be out of the general run of things, which gives him the benefit of its pages, and doubtless even goes to the length of paying him! Unfortunately he has got the ear of a really influential paper; and as he hesitates at nothing that can injure Canada in the popular estimation here, I confess that I should like to see him dressed down a little in the columns of that same paper. I am sorry to see that he has taken unfair advantage of your Manitoba articles. I will venture to say he will carefully abstain from quoting any of those which you promise on the brighter side of the question.

The tenant-farmer delegates will now be busy amongst you, and their reports will be awaited with intense interest. Should they be at all generally favorable—and in all honesty I cannot see how they can be otherwise—a great movement westward may be looked for in the spring. Every day seems to be deepening the gloom settling over the agricultural interest in this country, and so far the outlook seems altogether hopeless. The Agricultural Commissioners, Messrs. Clare, Sewell, Read and Pell, I see, have got as far as Winnipeg. From what I heard before they left I think it is a feather in the cap of somebody in your Administration to have got them so far into the heart of the Dominion.

The trade in Canadian horses of superior quality has somewhat improved during the last few weeks, and indeed has been brighter in Liverpool than it has been for some months past, a large number of sales having been effected at remunerative prices. I may remark that two Torontonians, Messrs. Eccles and Douglas, who arrived here recently with a very fine selection of Canadian horses, have met with fair success, sufficient at all events, as I understand, to warrant their return to this country with another lot. You will probably have seen announced in the press before this that the English Government has contracted for upwards of one thousand cavalry horses from Hungary. These are being sent on to this country, via Rotterdam, in drafts of 120 each, and the first instalment has now arrived. As to the reasons why the British Government, or rather their contractors, have gone to Hungary—the first probably is that the principal contractors are Austrian Jews, domiciled in London, and these have connections throughout Austria and Hungary. Another reason, and probably a yet more important one, is that the Austrian horses have more blood than the Canadian. I noticed recently in perusing the Canadian papers that a meeting of horse-breeders and others interested had been held at Toronto, at which it was suggested that the Government should give some patronage to the breeding of better class horses. I may here state that the reason why the Austrian horses have so much more quality than the Canadian is that for many years past the Austrian Government has imported English thoroughbreds and had them located in the horse-breeding centres of Austria and Hungary, where their services have

been available at merely nominal charges. Thus not only has the Austrian army been supplied with some of the finest horses in the world, but there is a surplus of first-class stock for export, and it has thus become a source of national wealth. I have taken a great interest in the importation of Canadian horses, and notice that with few exceptions there is a sore lack of quality. "Slaves," it is true, you have in any number. In conversation with the Managing Director of the Liverpool Omnibus and Tramway Company, I learned that there was no fault whatever to be found with our Canadian horses of the class required by their company. After a little rest they were found to have grand constitutions and good legs, and if there was a fault it was the flat foot. I have also conversed with many dealers who have purchased horses in Canada, Canadians interested in the trade, and others, and I am fain to believe that this defect is to be attributed to the too extensive introduction of Clydesdale stallions of inferior quality. No doubt, with the ordinary Canadian mares, substance was wanted, but the Clydesdale leaves the impression of coarseness—both before and behind, which it will take generations to obliterate. I myself cannot see how half-bred Clydesdales with all their weight could have also the lightness and activity so essential to general purpose horses of the Dominion which are always on the trot. Again Canada being so near to this country, any farmer can come across here and buy a horse, but he lacks means to buy a first-class one. The consequence is that culls have been introduced to the Dominion. The word "imported" on the "visiting card" would appear to have been a sufficient introduction to any district. These culls are invariably second and third class Clydesdales, and have been cast or sold at a low figure in this country in consequence of some defect—flat feet or some more serious detriment. Of course I am aware that there are many meritorious exceptions to this rule, as Canada has a few of the finest Clydesdales in the world. Still I am of opinion that the horse for America is the good old-fashioned up-standing Cleveland Bay stallion, which possesses the size, as well as quality. Since the introduction of Victorias and other light carriages, which brought into use the horse of 15.3 for park and other purposes in this country, the Cleveland Bays have come into disfavor, and may be difficult to find in the country. Yet I believe that if a few good self-colored horses, instead of the variegated wretches—sorrels and others—a description of which I read of at your shows, could be introduced by the Government or Agricultural Societies or County authorities, a most beneficial turn would be given to this important industry—so easily to be made a source of great national wealth; for it has become patent in this country that it does not pay the British farmer to breed carriage horses or hunters. It thus becomes a question whether in the immediate future Canada and the States, or continental countries, shall supply the increasing English demand. Already our requirements, beyond our home supply, amount to some 40,000 head per annum.

The past few weeks have been an anxious time to all concerned in the live stock trade at this port. Last week a cargo of sheep, ex the Bulgarian, from Boston, U.S., was ordered to be slaughtered on the quays in consequence of foot and mouth disease being found amongst them, and on Monday last the live stock ex the S.S. Quebec, from Quebec, was detained because Mr. Moore, the inspector for the Privy Council, fancied that he had detected the same much-dreaded disease amongst the pigs on board. The Canadian Government Agent here at once took up the matter, and Prof. Dugleid was sent down by the Privy Council from London. He

made a thorough inspection of the whole cargo, and could find no trace whatever of disease, though a few of the pigs had abrasions on their hoofs, caused by a rough passage, or, more probably, by travel on a macadamised road before being put on board. This is not the first time that Mr. Moore has stopped Canadian live stock on account of disease which has been found to be non-existent; and it is more than probable that, were it not for the fact that the Dominion Agent here is constantly on the qui-vive, and insists on a thorough investigation of each case, Canadian stock would now be in the same category as the States' importations—a state of things which would give huge delight to certain people here and elsewhere. It seems monstrous that a man who cannot distinguish between foot and mouth disease and accidental foot abrasions should have a trade of such enormous proportions at his mercy.

The condition of the Canadian cattle and sheep which have recently come to hand in this country has been simply wretched. When will farmers and exporters come to realize the fact that it will not do to send grass fed beasts to this country? They may have been very fair beef when they started, but they shrink away at a tremendous rate on the passage, and even after arrival here. As to sheep, the breeding and quality leave little to be desired, but they are sent forward in an unfinished state, and the consequence is that they have to be disposed of as stores. I was taken by a gentleman in the neighborhood of Liverpool to look at 100 Canadian sheep which had arrived some months ago. They had a few score of the choicest English sheep with them. They had all been put on some splendid keep, and it was utterly impossible to distinguish between them till they were caught and their brands examined.

The weather, according to localities, has varied here of late. In some parts of Ireland and Scotland we have had a period of fine weather, which has tended to somewhat improve the condition of the cereal and hay crops; but the long-continued wet season has made the potatoes a complete failure throughout the British Isles. This country, as you are aware, is already a large importer of potatoes, and the trade must now be largely increased. Last year the amount of money spent on potatoes imported was close on twelve millions of dollars; this year, unless we do without potatoes, which is hardly likely, it may be assumed that we shall have to send twenty millions of dollars out of the country in order to keep up our supply. Will not Canada take her share of this? The earlier potatoes have come mainly from the Channel Islands, and Malta, Spain and Portugal, and the main crop from Germany—particularly Pomerania, Holland, Belgium and France. But this year those regions have been sufferers also, and the surplus for export will be internally diminished. I notice by the Board of Trade returns that Canadians are alive to the position, and several consignments have arrived here. I understand that the first shipment realized eight shillings per cwt, which would be about \$40 per ton. It is difficult, of course, to say whether this price will be maintained, but it is probable, from present prospects, that it will be exceeded. I would like to remark to intending exporters that it is the same with potatoes as with horse-flesh, cattle, sheep, pigs, butter, cheese, and everything else—unless it pays to ship the best they have it is better to leave the business alone; for any man who ships inferior stuff to this market will be sure to get his fingers burnt. In respect to potatoes care must be taken to send only such as are white and floury boilers. Coarse, yellow, soapy potatoes could not be disposed of here at any price. They would simply have to leave them on the dock quays to rot, and get fined for creating a nuisance.

Manitoba, No. 5.

As we journeyed to Manitoba we conversed with numbers of the passengers on the train, most of whom held very high opinions about the country. Many had been there and were returning, some with their families, some were taking stock with them, others were taking merchandise; many ladies and their families were going to their husbands, who were settled there. We ascertained the circumstances, positions and prospects of most of them. We purpose giving you the experience of Mr. Plaxton, who appeared to us as being more like the average of our readers, and a man of energy, intelligence and enterprise. He was formerly a farmer in Middlesex. He went to Manitoba and travelled about it. He did not suit himself in getting a location, and preferred to go 500 miles north-west, to the Saskatchewan Valley, to examine the country. There he selected a location and put his land under cultivation, and was then returning to Manitoba with his wife and family. His reasons for going so far were stated thus: The land in Manitoba, near Winnipeg, is too wet, and is very difficult to drain; there are too many reserves in Manitoba; the land is in the hands of speculators and he did not believe in stopping there to make roads and improve the property for their benefit, and pay for the land besides. He added:—"On the Saskatchewan we have far better land; we can raise more wheat per acre; it is a better stock country." He liked the soil and water better. We enquired of him what he would do for a market there. He said they had a better market than Manitoba.

The cost of freight on provisions to the Saskatchewan is \$6 per 100 lbs. The Canadian Government must either feed or fight the Indians. The former would be the course that Canada would adopt, and he intended to raise grain and cattle. He had no fear about a market. A person lacked judgment, in his opinion, to pay for land in Manitoba when they could get plenty of better land on the Saskatchewan free. It is our opinion that Mr. Plaxton will come out in the long run as well as any passenger on that train. The state of the roads prevented us from reaching the Saskatchewan Valley. Besides his family he took stock, implements, and two years' supply of meat and groceries. His bread he had already raised there. We are convinced that many who go to Manitoba become excited and are apt to purchase too hastily. A person going there should take plenty of time to look about, and never be in a hurry to jump at what he first thinks to be a bargain. The Government must fix a tax on all this land held in speculation. No reserve should be exempt. The tax should be made to fall extremely light on an immigrant who only holds land enough to raise his bread and support his family, as these are the men who improve the country for the benefit of those land grabbers who are a curse to the Province. The voice of the people will demand this also. The placing in office of ignorant, inefficient men because they are their friends, or may have supported some political party, is another great detriment to Manitoba. Despite the many drawbacks which are always to be found in new countries there is a grand future before this great North West territory. We quote the following from an exchange:—

At a dinner given in Winnipeg to the English Commissioners, a great future for Canada, as the great wheat-growing country of America, was predicted by the speakers. Mr. Taylor, U. S. Consul, explained the three great productive belts of North America, speaking of the cotton belt of the south, the corn and pork belt to the north of that, and then the great wheat and meat belt of the north, three-fourths of which at least is comprehended within the Canadian Northwest. The great country between the Red and Peace rivers

was to supply the Old World in the future. Minnesota was only on the southern margin of this belt. Canada was to be the great future grain supplier of the world, with Russia her only competitor. The meat supply of Canada, he said, was superior to anything that could be furnished in the United States. The Commissioners, Messrs. Pell, M. P., and Reed, M. P., expressed very favorable opinions of the country, Mr. Reed, a thorough practical English farmer, saying:—"Manitoba has the best and most productive land in the world."

(To be continued.)

Ten Million Dollars per Annum.

The Hon. Wm. G. Le Duc, U. S. Minister of Agriculture at Washington, has issued a well-prepared and clearly illustrated work on the diseases of farm stock. It treats very fully of pleuropneumonia and hog cholera. It shows that the loss to American farmers amounts to *ten million dollars* per annum by the death of hogs from this disease. We ask Canadian farmers to discuss this subject at every store, hotel, blacksmith shop, and at home. We have told you that this disease has been imported into Canada on more occasions than one. The Board of Agriculture has done nothing towards preventing the introduction and spread of this dangerous disease among your stock. The Government has not been pressed as much as they should have been to prevent the importation of American hogs amongst us. When diseases are once fairly set going in a country who can estimate the loss. Prevention is what we should ask for. The time is coming when greater care will be exercised in selecting pure and healthy meat, and such meat will command a much higher price than when danger is known to exist. Meat from diseased hogs, we know, has been sold in Canada, and who can say that trichina may not be doing its work amongst some of our droves. Our Government has done one good act in preventing the importation of American cattle into our Dominion. They will not act for the best interests of the farmers if they allow that restriction to be removed through the persuasion of persons favorable to the United States, or for railway interests until the last vestige of a chance of introducing pleuropneumonia has long passed away. From recent accounts there have been fresh outbreaks of this disease in the States. Every reader of this journal should let his voice be heard and ask that our stock be kept free from the probability of being infected, and that American hogs be kept out of our Dominion also.

IMPORTED DISEASE.—The Agricultural Gazette (England) speaks thus of the results of the prohibition of diseased animals from America:—"The Kentucky Live Stock Record courteously challenges the accuracy of the following sentence taken from these columns:—Since England checked the importation of cattle, she has become almost entirely clear of the more virulent disease, and has, we venture to say, as healthy herds as any country in the world. We assure our contemporary that this sentence is literally true. The success of the severe measures of the English Government (unpalatable as they were at the time to numerous cattle breeders and dealers) can no longer be gainsaid. Since the trade in live stock has been restricted, and supervision insisted on, the country previously over-run with "foot and mouth," and seriously affected with the "pleuro," has become exactly what is written above, almost entirely clear of the more virulent diseases, and such success following upon the terrible loss of 1876 and 1877, demonstrates the wisdom of continuing the surveillance, which has produced such happy results."

With the frosts of October will close the year of garden work.

Trees may be safely set if a good supply of roots are taken every season when without leaf.

November is said to be the best month to transplant evergreens. Try it.

A Dominion Farmers' Club Suggested.

\$50 OFFERED IN PREMIUMS.

The state of our public agricultural affairs cannot exist much longer as they are or as they have been for years past. Farmers are now just beginning to see that political influences, city and local interests, American and personal interests, are and have been considered rather than the interests of the real practical farmers, and that much of the money which is exacted from the farmer is expended against his interest rather than for his benefit. In no country in the world is agriculture carried on in such a complete manner as in Britain; in no country are there finer agricultural exhibitions, conducted on more useful and honorable principles than in Britain. We believe the Government does not give one cent towards the Royal Agricultural Exhibition, or for model farms or schools of agriculture; neither does the Government expend its money in raising stock or crops to compete against private enterprise. It is our opinion that if Government were to leave the farmers to manage their own affairs they would be managed much more beneficially and economically than they are now. People that have only the one object in view, namely, that of getting all the money and all the patronage for as little as they can, are not so efficient in their positions as men who have an interest in the work they undertake. The efficient management of the Industrial Exhibition is due to the energetic, efficient and judicious supervision of the volunteer managers. The high position obtained by the Western Fair is due to the same cause. The great loss and the enormous cost of the Provincial Exhibition is due to causes alluded to. While the two former exhibitions have added to their resources, and have done much more good this year than the Provincial Exhibition; they have done no harm that we are aware of, whereas the Provincial Exhibition and its managers have done much harm, perhaps an irreparable injury. We shall all be called upon to pay from our hard earnings more money to keep that inefficient, rotten institution in existence, for if it is to be supported the present funds cannot sustain it; and yet the President in his last address, alludes to the necessity of enacting a law to prevent the success of the private exhibitions, such as the Industrial, Western, Union, &c. We do not think the farmers in this the 19th century would support a Member of Parliament who would dare bring such a Bill before the House.

The Model Farm was established for the benefit of an individual. The ground on which it is established is the worst that could be selected for testing. The sale of produce has interfered very materially to the injury of private enterprise. Managers and officers have been selected for political purposes. McCandless, the American, the first manager, no doubt was elected for favors received or expected by its main controller, Christie. Americans were allowed to make purchases of stock which had cost us Canadian farmers ten times more than was received from the Americans for them. This purchase, small as it may have been, plainly indicates what we might expect. Again, when information was wanted for the benefit of Canadians about a certain test made, the information the Canadians got was that no information was to be given before the Board were first informed; and as the American Senate rules, the first information must be for the Americans. Can we take a better pattern than from the Royal Agricultural Association, of England? The Elmira Farmers' Club, in New York, imparts a vast amount of valuable information to its members and to the public.

There should be township clubs, county clubs, and provincial clubs. Members of the county clubs should be elected by township clubs; county clubs should elect members for the provincial clubs, and the provincial clubs should elect members for the Dominion Club. A fee of \$1 per annum should be paid for membership, or \$10 for a life membership. No member should hold the same office more than four consecutive years, except the Secretary. The Secretary should be the only officer who receives pay. These clubs should have the management of all Government moneys that may be granted for the purpose of aiding agriculture in any way. Rules, regulations and by-laws should guide the management of these clubs. Five members should form a quorum. To encourage this project we now offer \$50 to be distributed as premiums in the following manner: \$10 to the first township club which may be organized in either of our provinces, namely, Ontario, Quebec, Manitoba, Nova Scotia, New Brunswick, British Columbia and Prince Edward Island. The clubs in each township must have their five life members, who have paid \$10 each.

If any of our readers can suggest a better plan, or if they object to this, we have a space in this journal for them to express their views, as a change in the present system assuredly must be made. The repeal of the old Agricultural Act was only a blind to keep the same men in power. Let us have light on this subject. Have you not some useful suggestions to make? Do you approve of the above? Either condemn it openly and fearlessly, or support it; or suggest a better plan. If you think the present Board are right in attempting to check private enterprise by law, as suggested, and as they have done; if you think they have been right in attempting to spread the foot and mouth disease, pleuro-pneumonia, and hog cholera among our Canadian stock, *which they have done*; if you consider that the funds of this Association have been honorably and honestly accounted for, *which they have not been*; if you are a free and independent person either condemn these vile assertions which this journal has fearlessly and unhesitatingly thrown out, or else let us hear from you in approval. Let your voice be heard at home and abroad. Do not attempt to excuse yourself before any person you may address by saying that the FARMER'S ADVOCATE will publish only its own tenets. We ask for fair, open discussion. The mere assertion that a person makes a false statement, or is in error, is no honest man's argument. Any one having objections or suggestions should let their views about our agricultural affairs be publicly known either through the medium of the ADVOCATE, or the Journal of Agriculture, published in Montreal. If you desire to be heard, and are not chained to party politics of either side, we may see your writings there, and will be ready to reply. We have not the time to wade through, nor even open one fourth of the political papers that come to our office. Agricultural interests should not be made subservient to the political interests of either party, but should be calmly viewed on their own merits.

In arranging for in-door plants, select, if possible, an east or south window. Winter days are short, and plants need light. It is important to give them brightness and warmth if we would have them thrive. If an east or south window cannot be had, then a west window is better than one opening to the north.

Experience has demonstrated that good, well-rotted cow manure is, in all cases, the best for house plants. Water can be placed on the manure and the liquid thus obtained can be used to good advantage in watering plants.

Don't Spare the Feed.

Now is the time to make money and enrich your farm. The prices of all kinds of farm stock are good. The best yield the most profit. Do not sell your coarse grain, but use it to fatten the old stock and keep the young growing. You can make more profit by feeding a pig in 12 months than by taking 24 months to fit it for market. You can make more money by feeding a beast for 30 months than keeping it double the time. By using grain, and keeping stock warm and comfortable, you can enrich your farm. The effects of feeding corn or grain to your cows and young stock enhances the value of your manure pile far more than you have any idea of. The following extract may appear astonishing and almost incredible to you, still we deem it worth perusal, especially as we quote it from the agricultural department of the New York Times, which is conducted by men of noted ability in treating on agricultural subjects:—

The books have generally taught us that horse manure is richer than that of cows. The fact is that feed makes the manure, and because horses are usually fed in large part with grain their manure is richer than that of animals not so well fed. But if we feed cows as well as horses, the difference in the value of the manure is reversed, and remains in favor of the former. This is reasonable, because the more an animal exerts the muscles violently the more it uses up the nitrogenous portion of the food to repair the waste. Horses which work constantly thus exhaust the food of its nutriment to a greater extent than cows, which lie peacefully and ruminate, and, turning their food chiefly into milk, are given every opportunity to do their best at this, their special business. So that when a cow gets a daily allowance of three quarts of feed, consisting largely of bran, rich in phosphoric acid, and two quarts of corn-meal, rich in nitrogen, or perhaps nearly double this allowance, besides clover and other nutritious green food, the manure cannot fail to be very rich, nor to tell its story when used in the field. For light soils there can be nothing better than the manure from well-fed cows, and there can be no better method of improving land than that of carrying on a dairy under a system of feeding by green crops cut and carried to the stable and yards. At the market rates for manure the cost of the feed is fully returned in the value of the manure, so that an actual proof is afforded of the truth of the chemist's estimate that a ton of bran or meal worth \$12 returns in the manure a value actually in excess of its cost price.

A NATIONAL AGRICULTURAL SOCIETY.—The beneficial results from the operations of the Royal Agricultural Society of England, have instigated Americans to organize a similar Association. A call has been issued throughout the United States for a meeting of all those who may be interested in the formation of a National Agricultural Society. The circular states that "an association is designed that will embrace every agricultural interest, and represent every section of the country. The object is the advancement and protection of American agriculture by practical methods; principal among those contemplated are the promotion of immigration, the holding of periodical national fairs in different parts of the country, meetings for discussion and the dissemination of thought and experience on matters pertaining to agriculture. It is believed that there is a wide field of usefulness for such an association. England's greatest and best institution is her Royal Agricultural Society, which contains over 7,000 members."

POTATO ROT is quite prevalent in Rhode Island and some parts of Connecticut. Reports are numerous of fields and portions of fields hardly worth the digging, and of large quantities of tubers rapidly spoiling in bins and barrels after having been gathered in apparently good condition. The disease seems to be confined almost entirely to the later varieties, the early ones having evidently matured soon enough to get out of the way of the trouble. Former expectations of a very large local crop are now, by these reports, much modified, and the markets in New London, New Haven, &c., have stiffened in consequence.—[Conn. Farmer.]

Improvement of Dairy Stock.

Of the many improvements urged incessantly by the FARMER'S ADVOCATE, the improvement of dairy stock was not the least, and we have the pleasure of seeing an advance in that direction. Better stock and productive cows are now more sought for; farmers and dairymen find that twenty good cows well cared for will bring to the owner a greater profit than twice the number of inferior animals. The dairy may be made to be profitable. The following article, which we abridge from the New York Times, on the Improvement of Dairy Stock, is plain and to the point:—

A new beginning needs to be made. Stock must be closely examined. No more slipshod work in the dairy can be done. Every man must know the good from the bad cows, and get rid of the latter at any sacrifice. Hereafter none but good and profitable cows can be kept. The best calves can no more be sold. The common idea that it cost too much to raise a calf from an extra good cow, when a full-grown cow (a four-quart-a-day cow) can be bought for less money, will have to be abandoned. A clear record of each cow in the dairy must be kept. The income from each cow must be known, so that the best may be retained and their calves raised to take their places. The character of the herd must be raised by the introduction of selected bulls from well-known herds of whatever breed the fancy may desire. It cannot be justly thought that this is a needless trouble and expense. On the contrary, it is business, and the true business method. There is much dead work to be done, work that does not pay to-day or this year, but is preparatory to profitable work hereafter, and without which business would soon cease. And in the dairy the rearing of young stock is dead work of the most needful character. A herd of cows that will yield 2,500 pounds of milk a year will cost as much to keep as one that will produce 5,000 or 7,500 pounds, and the latter yield is quite a possible one. Thousands of dairies in the country do not average more than 8 pounds a day, 2,500 pounds in the year, which, at the low prices current for some time past, does not pay for the feeding. Herds, on the other hand, could be pointed out which reach the latter figures. A well-known Ayrshire herd shows by its record 10 cows that average 5,000 pounds each in the year, 17 that average nearly 7,000 pounds in the year, and some that go over that. A prominent Dutch herd averages from 8,000 to 11,000 pounds in the year. A well-known short-horn herd of pure breed averages over 5,000 pounds yearly. Several butter dairies reach a product of 300 pounds per head yearly, and what these do others may. Heretofore, high-bred herds, from which we have been led to expect extraordinary performances, have been damaged or ruined by too much attention to color, form, and pedigree, and other useless attributes of herd-books. Hereafter, the good sense of breeders of dairy stock will lead them to look at performances as of greater value than any other points, and a great improvement, if not in actual daily yield, still in persistence of yield for a lengthened period, may reasonably be expected from the important innovation. So that, while dairymen may even now greatly improve their stock by the introduction of choice bulls and the careful rearing of the progeny of these with the best native cows they can select, in the future they may look for still better material to work with than they can now procure.

The cost of the improvement is within the reach of every dairyman. A herd of 40 cows can be served at a cost of \$5 per head the first year, or perhaps less than that—as this will pay the purchase money of an excellent bull—and after the first year the cost will be about \$1 per cow, the mere expense of feeding the bull being the whole of it. A calf can be brought to cow's estate at an expense of \$30 for feed and attendance. A good cow cannot be procured for so little money as this, and a poor one, it is to be hoped, will be considered hereafter as not worth having as a gift. The fact is, each dairyman has in his own hands a remedy against future loss from possible low prices, and the means of doubling his profits in the good time now apparently at hand.

A great flight of grasshoppers was observed at Dallas, Texas, Oct. 16th and 17th. They passed over the city from a northerly direction. Reports from various points in Northern Texas say grasshoppers have appeared, but so far no damage has been done.

Our Cattle Trade—A Yankee Dodge.

As we go to press we notice in political papers that the United States Treasury has issued a circular prohibiting the importation of neat cattle from Canada, to go into effect on the 1st of December. What such a restriction is issued for we cannot conceive. Some Canadian journals attribute it to a retaliatory feeling; some Americans say it is to prevent the introduction of disease from Canada, but as there exists no disease of an infectious nature among our stock that argument cannot hold good. What effect it will have on our stock and our market is what we have to consider. Our opinion is that it will act most beneficially on our trade and most profitably to our farmers. All that is now necessary for us to do is to feed a little better, aim to raise larger animals, and to fatten them better. We have the British market open to us for live or dead meat. The Americans have purchased some of our stock, fattened it and sent it to market. Why cannot we fatten our own stock just as well? They have bought large numbers of our lambs yearly; if our farmers had kept and fattened them they could make them pay as well as the Americans can.

We are pleased that they have prohibited the trade. It will tend to the enrichment of our farms and farmers, and we trust that now they have issued the proclamation, they may not recall it until their stock are free from the numerous infectious diseases that infest them. That will take a long time; perhaps they never will be eradicated. Then, and not till then, we might hope that such arrangements might be made between the two countries so as to abolish entirely the expensive custom-house force.

Our Dominion Government has acted wisely in preventing American cattle from being imported; they would confer a blessing on Canada if they would prevent the possibility of hog cholera being again imported from the States. We do not consider that our Government acted for the best interests of the farmers (although it may be regarded by them as intended to be such) when a duty was put on American corn. For the benefit of all real farmers that we have spoken to on this subject, we feel safe in asking for them that the duty on corn may be removed. Our farmers want cheap corn to enable them to manufacture beef, wool and mutton, and to enrich their farms. It would add much wealth to the nation if the duty on corn was taken off; we do not know any it would injure. The profit to be made now by having cheap corn would richly repay all that the Government realizes as duty in many other ways.

Pear Blight.

The Gardener's Monthly gives the following cause and cure:

It has shown by careful microscopic examination in its earliest stages, that the disease is caused by a minute fungus which develops in the bark and penetrates inwardly, destroying the cell structure as it proceeds. The fungus is so small that the distinguished investigator, Dr. J. Gibbons Hunt, under a powerful microscope, could not distinguish the species; but this is of no consequence.

This being the cause of the disease, the preventive is obvious. Any one who is in a neighborhood liable to blight, can have immunity by washing his trees annually with pure linseed oil, sulphur wash or other things that will kill a fungoid spore without injury to the bark. Of course spores may get into a crevice where the washing can not reach, and hence may be some cases where, even though the trees be washed, there will be disease. The cause of the disease has been so clearly demonstrated, and the remedy so patent, that the cases of "fire blight" only prove ignorance or neglect.

Apples—How to Use Them.

Many of you have a good crop of apples this year; perhaps you will have none next season. Some are selling in the orchards; some are carefully storing their best; some are letting their stock eat them; some are letting them rot. Read the following from the Country Gentleman. Perhaps some of you may want apple butter next year, or wine, cider or vinegar; careful farmers will have some of each. Many thousands of dollars worth will be wasted. Have you made the most of yours? If not, try the following:

CIDER VINEGAR.

This is almost a necessity in house keeping, and is easily prepared. After cider is fermented draw it off into a keg, and take strips of straw paper, dipped either into West India molasses or maple syrup, put them into the keg of cider and set in a warm place, near a stove or chimney where it will not freeze, and in a few weeks you will have a sharp, pure vinegar. If one needs it to use in a shorter time, they can fill a jug with cider and turn into each gallon of cider a pint of molasses and a cupful of lively yeast. Have a jug full of the liquid, let it stand uncorked back of the cook stove where it will keep warm. It will commence fermenting in twenty-four hours, and will not take over a week to make splendid sharp vinegar. It must be drawn off into another jug, leaving the dregs, and kept in a tight corked jug or bottles, where it will not freeze. If one has good cider, there need be no trouble about vinegar, as it can be made into sharp vinegar in a short time by using a little labor, and taking care of it. Straw paper, saturated with molasses, acts upon cider like mother, and in a few weeks has every appearance of that article, only a little firmer in consistency, and rather thicker in texture.

BOILED CIDER.

This is prepared by boiling sweet cider down in the proportion of four gallons into one. Skim it well during boiling, and at the last take especial care that it does not scorch. A brass kettle, well cleansed with salt and vinegar, and washed with clear water, is the best thing to boil it in. For tart pies for summer use it is excellent; and for mince pies it is superior to brandy or any distilled liquor, and in fruit cake, it is preferable to brandy. It is a very convenient article in a family.

CIDER WINE.

To three gallons of new unfermented cider add nine pounds of sugar; dissolve the sugar by stirring it well. Put it into a sweet keg and let it stand four weeks; then strain it through a cloth strainer and put it either into bottles or jugs, cork tightly and it will keep for any length of time, as age improves it. Every housekeeper knows what a luxury and convenience a pure unadulterated wine is in a family, either for cooking purpose or medicinal uses. Maple sugar is as nice for wines as any other.

Instead of fencing in a garden, leave it open, or at least with a space of full twelve to fifteen feet all round. It can then be worked almost entirely by horses attached to the plough, harrow and cultivator, and at one-fourth the expense, and perhaps even less, than with the spade, the fork and the hoe. I have had my garden kept open for many years past and nothing would induce me to let it be fenced. The cart or wagon, also, with manure, can be driven freely upon this, and also to take off the vegetables when grown, for there is plenty of space all around to come and go and turn.—[Cor. N. Y. Tribune.

Cargoes of wheat are continually shipped from Montreal to Bordeaux, Antwerp and Rotterdam, this being the opening of a new foreign trade.

Winter in the Sheep Fold.

Sheep should have better care in early winter than farmers are in the habit of bestowing. Wintering sheep to make them live only, is not attended with profit, let prices rule high or low. Sheep are commonly neglected more in early winter than any other farm stock, for they are often the very last taken from the pastures.

If sheep go into winter quarters in a declining state, the result is a demand for extra feed and care during the winter, and a light clip of wool in the spring. When a sheep is thriving, wool grows rapidly; when a sheep is declining the growth is checked. If kept fat, large fleece; if poor, a light one. Sheep should have a little grain every day, from the time grass begins to fail in the fall until it has a good start in the spring. I would rather my sheep would have a gill of corn or oats per day from the middle of November till April, than a pint a day from January till June. There should be one object constantly before the mind of the flockmaster, and that is, to keep his sheep in a thriving condition.

Shelter is one of the first objects in wintering sheep successfully. Farmers often condemn barns and sheds as unhealthy places for sheep, when it is a want of ventilation that does the injury. It is no argument against housing, because some people keep them so poorly ventilated as to injure their health. Nor is it an argument against shelter for stock, because it is improperly used. I am no believer in having sheep shut up too closely; I like warm comfortable quarters for them at night, but they should not remain there all day. They should go out, get some exercise, and have some sunshine after a storm. We ought to know and appreciate its beneficial effects on animals.

Too large a number of sheep should not be wintered together. I believe seventy-five is enough for one lot; by no means let there be more than one hundred. There is much more danger of disease in large flocks than in small ones. The proportion of sheep that do not thrive is always greater in large flocks than in small ones. The division should be made so as to put sheep of about the same strength together. Lambs should be by themselves, with a few old tame sheep to keep them tame. All large and strong wethers should be by themselves, also all breeding ewes. By this system of division all have an equal chance, which is impossible where large numbers of all ages and conditions run together.—[Rural World.

PROTECTING PLANTS IN WINTER.—Pits dug in the ground and walled up, say to the depth of about four feet, are excellent as a means for preserving tea and Bengal roses, carnations, and other half-hardy things over winter. In the bottom, in a soil containing a good proportion of sand, the plants may be hilled in pretty thickly, or the pots plunged up to the rims. Here also plants such as cabbage, cauliflower, lettuce, etc., for early use, may be heeled. They must be kept from hard frost by a covering of glass, and hay or mats, and have ventilation in fine weather, or when it is not freezing. A little care will thus enable you to winter successfully many plants, both for the vegetable and flower garden.—[Prairie Farmer.

COLORING BUTTER.—A Dairyman speaking of coloring butter, says:—A neighbor grated red carrots and put them into the churn with the cream; but he preferred giving the cows the carrots with the hay, and thus got his butter colored in the cow instead of outside of her. An excellent plan, for he not only obtained it, but the further advantage of the roots moistening and softening the hay in the stomach and making it almost equivalent to a ration of luscious grass, and an additional ration in them also for the cow.

A FINE COUNTRY FOR SHEEP.—The heat killed seven thousand sheep out of a flock of twelve thousand being driven from Kern County, California to Willows, Nevada. And yet we find some farmers leaving the healthy climate of Canada for the malarial regions of the South-west.

The largest orchard in the world is probably that of Robert McKinstry of Hudson, N. Y., which contains more than 24,000 apple trees, 1,700 pear trees, 4,000 cherries, 5,000 peaches, 200 plums, 200 crabs, 1,500 vines, 6,000 currants and 500 chestnuts. The apple crop of last year was 30,000 barrels.

Dairy.

Ensilage.

BY L. B. ARNOLD.

Ensilage is a term used to signify a new mode of preserving various kinds of green, and especially succulent cattle food, by burying it in pits to protect it from the influence of the air. The most approved mode of doing this is to dig a deep, narrow and comparatively long trench in the earth in some location where it will not be affected by water, and to wall up the sides with brick or stone. This form is preferred for convenience in filling and removing, and also in covering, the length being determined by the quantity of fodder to be preserved. The green food, whatever it may be, is pulped or cut as fine as desired for feeding, and is then filled into the trench, a silo, as it is called, and pressed down and covered with earth deep enough to guard against atmospheric influences, the fodder of course being protected from direct contact with the overlying earth by some intervening covering. In this way it is customary to some extent in France, Germany and Holland to preserve for winter use green fodder-corn, green clover, lucerne, beet and turnip tops, cabbage, and the pulped roots of beets, mangels, turnips and the like.

A good deal has been said of late by agricultural writers in favor of introducing the practice into this country as an aid to winter dairying, but, without any experience in the matter, for certain theoretical reasons I have the impression that it will not be likely to meet the high anticipations of some of its advocates.

There is nothing in the way of success on the score of preservation. The testimony in favor of its not spoiling the food for six months or a year is unquestionable, if properly managed. But the green food does not remain in the same condition in which it is buried. Fermentation, it is stated, sets in and runs for about two months. During this process the character and composition of the food becomes materially altered.

First, it loses a part of its water. This is no detriment, and perhaps an advantage, as the food which is accustomed to be preserved contains an excess of moisture, an objectionable feature in food at any time, but more especially so in food for cold winter weather.

The carbohydrates—the heat and fat producing elements—become changed, losing something of their value and forming new products such as carbonic acid gas, new fatty acids, alcohol and ammonia.

Notwithstanding the large amount of souring produced by the long continued fermentation, the food is said not to be sour, but, on the contrary, alkaline, on account of the large development of ammonia, which is more than enough to neutralize all the acidity produced. This being so, it argues a greater loss of flesh-forming matter than of sugar and other fat-producing substances, since the ammonia must come from the flesh-forming matter. But a loss of a part of the nutrient and fattening material does not of necessity decide the comparative merit of saving fodder by the new process, because it is possible there may still be left in it as much, or even more, digestible and consequently available food than there would have been had the green herbage been left to mature to the usual extent, and then been preserved in the ordinary way. It is a well-known defect in much, I may say most, of our winter cattle food, that while the nutriment in it may be good enough, it fails to give satisfactory results because it is in a comparatively indigestible condition from becoming too ripe.

Food in its natural state, that is, with its life-sustaining properties unchanged in quality, is the most conducive to health and to the best milk and the finest butter and cheese. When we deviate from this, as we do when food is fermented, we depress its ability to produce the finest effects. Not that cattle food is always in its best condition when used just as nature produces it. Immature clover, for example, makes better milk when partially or wholly dried than when grazed from the field, especially if the growth is very vigorous and rank. There is no change in the food material in this case. The difference is that a part of the excessive water and some of the objectionable flavors pass off in drying and even in wilting, improving thereby the flavor of the milk made from it. The same is true in the use of green lucerne and other green plants of the clover family, and very green and succulent fodder corn and some other kinds of herbage when fed in a fresh and green stage.

With the same green food the chances for fine quality are better when it is fed dry and otherwise in a natural condition, than when it is fed undried and fermented.

The great defect in our winter food for the dairy is not so much that it is dry, as in the fact that it is cut when it is too far matured, at a stage when much of its value has been dissipated and when it can only be slowly and imperfectly digested. Such food makes it an up-hill business for cows to sustain themselves in our long cold winters, to say nothing about giving a large yield of superior milk.

When dairymen will adopt the practice of cutting the winter food for their dairies early while it is in its best condition, instead of leaving it to ripen till it loses in value and digestibility because it will dry quicker, there will be little occasion for ensilage to improve the quality or increase the quantity of milk. For this purpose dried grass and other dried food, with such green roots as can be easily preserved, it is believed will be found cheaper and superior to the same material fermented in silos. Whatever the result may prove when fully tested, it will be the part of wisdom to move cautiously in its adoption.

Drink for Dairy Cows.

A writer in the Southern Farmer says that his cow gives all the milk that is wanted in a family of eight, and that from it, after taking all that is required for other purposes, 260 pounds of butter were made this year. This is in part his treatment of the cow:

"If you desire to get a large yield of rich milk give your cows every day water slightly warm and slightly salted, in which bran has been stirred at the rate of one-quarter to two gallons of water. You will find, if you have not tried this daily practice, that your cow will give twenty-five per cent. more milk immediately under the effects of it, and she will become so attached to the diet as to refuse to drink clear water unless very thirsty. But this mess she will drink almost any time and ask for more. The amount of this drink necessary is an ordinary water-pail full at a time, morning, noon and night."

WINTER FEEDING OF DAIRY STOCK.—The Agricultural Economist (England) says:—Then, in regard to dairy farming it is tolerably evident that farmers in general are not half particular enough as regards the quality of the food which their animals eat. Grass is grass; and hay, hay, with the majority of feeders, whereas a chemical analysis would often show a difference of something like 50 per cent. in such products going under the same name. The good policy then of adding to poor grass and poor hay some richer adjunct so as to bring the nutritive quality of the dietary up to a high standard, ought never to be overlooked. When the milk is sky blue in colour, and raises only a thin head of cream, the probability is that the feeding of the cow requires to be improved, and the bestowal of a little corn meal, or bran, under such circumstances, would be likely to prove highly remunerative in results.

Feeding for Milk.

Prof. Dale, of Norwich University, Vt., gave the result of an experiment in feeding milch cows, to the *Vermont Chronicle*, going to prove the special value of corn meal and bran in the production of milk. We condense his report somewhat as follows:—

I had three cows, which I was feeding for the double purpose of getting milk, and at the same time fattening for beef. They were all farrow, one of them had been so for two years. They belonged to the common breed, and where what are called good milkers. At the time I began feeding they did not give enough to pay for the hay they ate. My object in experimenting was to find out, as near as possible, the most profitable feed. I continued the trial for four weeks with the following result.

The feed the first week was 8 lbs. of "shorts," half a bushel of sugar beets, and 10 lbs. of hay per day to each cow. I fed the shorts night and morning, 4 lbs. at a time. The beets were given at noon. They were fed all the hay they would eat up clean, three times a day. Thus, the first week I fed the three cows 210 lbs. of hay, 168 lbs. of shorts, and 10½ bushels of beets. The hay was of poor quality. I estimate the cost as follows: 168 lbs. of shorts at \$25 per ton, \$2.10; 210 lbs. of hay at \$12 per ton, \$1.26; 10½ bushels of beets at 15 cts. per bushel, \$1.57. Total, \$4.93. We got 379 lbs. of milk, making 16½ lbs. of butter, taking 23 lbs. of milk to make 1 lb. of butter. The butter was of the best quality, and at 30 cts. a lb. would bring \$4.95. There was in addition the skimmed milk, and a steady gain of the cows in flesh.

In the second week the feed was the same as the first, with this exception—instead of feeding 8 lbs. of shorts, I gave them 8 lbs. of feed, composed half each of corn meal and shorts. This week I got 364 lbs. of milk and 18½ lbs. of butter, or 1 lb. for a little over 21 lbs. of milk. The cost of feed this week, calling corn as I did \$2 per hundred, was \$5.65. The butter was worth, at 30 cts. a lb., \$5.55.

The third week the feed was the same as the first, with the exception of feeding bran instead of shorts. Amount of milk this week, 380 lbs; both butter and milk same as first week.

Fourth week same as second, only using bran instead of shorts. Milk this week 480 lbs.; butter, 19 lbs. Cost of feed same as second week, \$4.65; butter worth \$5.70.

I have not tried corn meal alone as grain feed, but from former experience am convinced that it is not as valuable for milk as either bran and corn meal mixed in equal parts.

I have no doubt from the above results and my observations since that no better feed can be given cows than corn meal and bran mixed. The cows have not only more than paid their keeping in milk, but have steadily gained in flesh, and are now fair beef. Had I only fed common hay, such as I had, they would not have paid their keeping. Perhaps I should state that all the feed was scalded, and cold water added, making a pailful at a time per cow. The butter made was very nice, far better than it would have been with only hay for fodder. I am satisfied that bran is fully equal to shorts in value, and to mix with corn it is better. With bran at \$25 per ton, and corn at \$40, I would use as much corn as bran, and feed them mixed. I have said little about the roots fed, my object being to determine the best kind of grain or feed to buy. But so well satisfied am I with the result of feeding roots that I would not on any account be without them. Every farmer would find it to his advantage to raise from 75 to 100 bushels per year for every cow.

WANT OF SUNSHINE.—Some idea of the clouded atmosphere of England during the late summer may be had from the observation of the speaker of the House of Commons. At his harvest home he said:—It is a very remarkable fact that the sun during the months of June, July and August, has been veiled by clouds for no less than 1000 out of the 1400 hours it has been above the horizon. No wonder that the harvest has been late.

It is said that a company of Germans have offered to come to Baltimore and set up a large sugar factory, provided the farmers will plant 2,000 acres, at least, with German beetroot. They guarantee to take the whole produce at the rate of \$5 per ton. It is considered that good land ought to produce 30 tons of beets per acre.

Garden and Orchard.

Seasonable Hints—November.

BY HORTUS.

OUT-DOORS.

The remarkable weather of the past month has been favorable for all out-door work, and no one can have any excuse in not being well prepared for the winter season. It is to be hoped that advantage was taken of it to do everything that will facilitate the spring work. There is still plenty of time in this month to do considerable in the way of planting, manuring, trenching and mulching. A walk through most gardens would reveal a very untidy state of affairs, as after the vegetables are gathered everything is left topsy-turvy to take care of itself till the renovating spring comes round. Now, it is but right to do a little "house-cleaning" in the garden, as it were, and commence by raking up all the leaves, tomato and potato vines, and weeds—piling all in a heap and burning, if no other use can be made of them. Pick up all stakes that have been used for training up plants, and tie in neat bundles for use next season. Save all the leaves and corn-stalks to use for mulching your strawberry beds or flower borders. If your rhubarb patch has been a long time planted, set out a new bed by digging up the old roots, dividing and re-planting the same. Give a liberal coat of manure to asparagus. Amongst the currants and gooseberries remove old bearing wood and shorten back new growth. Throw up the soil by spade or plow, leaving it in the rough for the frost to make it mellow and friable. Stiff soils may be advantageously treated in this way.

Planting may be done till the ground freezes. Many persons decry fall planting, but the experience of a life-long cultivator of fruit in our country is in favor of fall planting. The principal cause of failures in fall planting is that the trees have been dug too soon in the nursery, before their growth was completed; but let the trees mature their wood well, and there is no better time to plant them, whether for fruit or ornament, than from the 20th of October till the ground freezes, generally about the 20th of November.

Grape vines require pruning and laying down. Grape borders should be renewed by the addition of bones and rotted sods. Collect all the slaughter-house refuse you can get to feed your vines.

Hedges, both evergreen and deciduous, should have a final clipping. If done now it will strengthen the growth in spring. Remove any long grass or weeds from the hedge bottoms to prevent mice from harboring therein. Where mice are found to be very destructive a good plan is to set up decoys for them by putting a sheaf of oats or some corn-stalks in little cocks amongst your trees. A weekly inspection will furnish amusement for the boys and dogs and get rid of the vermin.

Pruning may be gone on with during fine days; so much time saved in spring. Apple trees should have the loose bark scraped off; thousands of insects in the chrysalis state will be destroyed by this work. Prepare for the Curculio amongst the plums by top-dressing heavily with ashes.

IN-DOORS.

All plants in the house will rise a hundred per cent. in interest since the frost came and destroyed the favorites of the garden. The scarlet *Salvia* seems to have deepened its color, while the sturdy *Geranium* grows and blooms as if in defiance of "Jack Frost." The abundance of flowers now grown in greenhouses, and the ease with which they all may be propagated, allows no excuse to any person for not having plants in winter. What

is first required towards having healthy plants indoors is to keep a moist atmosphere and an even temperature. In the early part of the season, beginning now, it is not desirable to force much growth on the plants; keep them as dormant as possible. Have them in clean pots, with fresh soil; keep the foliage free from dust and water sparingly. Under this treatment they will gain vigor, and when the days begin to lengthen your plants will commence growing and flowering.

Plants require all the sunshine to thrive, and it is useless to expect much growth during the short days of early winter.

Roses are the most desired for house culture, and sometimes are difficult to manage unless they receive proper care at the outset—and that is to keep them quiet, not forcing the growth till they are found to have plenty of working roots. Another thing is to use the knife and cut hard back all the old wood, causing an entirely new growth, which will have strong vigorous foliage, and give fine flowers.

Greenhouses, now that there is room to work in them, should be thoroughly cleaned and receive a coat of paint—this they require every year. The plates at the bottom of the rafters requiring it should be cleaned of the vegetable growth which arises from the secretions and drippings from the roof. Old plants covered with scale and mealy bug should be cut back and the foliage washed. Plants like *Camellias*, and other broad-leaved evergreens, require washing. A hateful sight in greenhouses is the presence of the mealy bug, a disgusting insect which infests soft-wooded plants, and once introduced it is extremely difficult to remove. persons receiving new plants should be careful to examine them and see that they are free from insects. An effective remedy for these pests among flowers is to syringe them frequently with coal oil and water. Commence with about a half pint of oil to two gallons of water, stirring it with the syringe till it becomes like soap suds, and apply.

Fruit requires frequent examinations in cellars. Apples became so ripe from the long hot fall that they will not winter well, and require decaying specimens promptly removed. Cellars and root-houses should be made frost-proof at once, and prepared for winter.

Black Knot on Plum Trees.

This disease is well known to be contagious. It is not caused by insects, but is found to be the work of a fungus, which is propagated by spores of seeds, and spreads in the young wood by its thread-like roots. These cause warty excrescences several inches long on the sides of the branches, and are greenish and soft during the early part of summer, which attracts the curculio to deposit its eggs therein, especially when the stone fruit is scarce. Other larvæ have also at times been found in these green knots, and this gave rise to the opinion heretofore held that insects were the cause of the mischief. It is found, however, that the disease originates under the bark, where insects can have no access. The spores of the fungus are said to ripen on the diseased trees during winter. Should the black knot be observed at any time, even in the bearing season, the knife should be at once applied and the knot burned.—[American Rural Home.

A WORD FOR THE PEAR.—There is another advantage in growing the pear. It usually throws its roots deep down into the earth, and does not seem to eat out the surface soil for a long way around as the apple does. After an apple-orchard comes fully into bearing we must give up the ground wholly to it; but we can crop up almost to the trunk of an old pear tree, and get very nearly as good vegetables there as in any other part of the garden ground. This is of course in allusion to old standard pear-trees where the branches have been trimmed up to a good height; as however rich the soil, good vegetable crops cannot be grown if shaded by branches. The main point is that the roots of the pear-tree do not rob the surface-earth near so much as the apple-roots do.—[Germantown Telegraph.

The Blossom Buds of Peach Trees.

The interest of our country in fruit growing is every year increasing. There are more trees planted, more coming into bearing and there is an increasing demand for their products. This is not limited to apples, plums and small fruits. No inconsiderable amount is received in our market for Canadian grown pears and peaches, and the growing of them is receiving increased attention. The Massachusetts Ploughman, writing of the blossom buds of pears, says careful observers know that a peach blossom in its proper state will endure a degree of cold which will nearly congeal the mercury in the thermometer, and that a frost will not injure the blossoms until they are fully expanded, and the fruit has begun to set.

The killing of the peach blossoms he attributes to the expanding of the fruit buds and the gum that holds the outer covering to the bud melting and leaving the buds exposed, the result of warm weather following cold weather about the last of October.

The remedy proposed is as follows:

How shall we avoid this destructive action? shall we go back and adopt the methods of by-gone days? But few are willing to do this; we are not willing to wait for a slow growth of wood, nor are we satisfied with medium sized fruit; the masses go for high pressure and two forty speed; so our peach trees must be kept in a high state of cultivation, even at the risk of losing the entire crop. Being determined not to go back, but to press onward, we must set our wits at work to overcome the difficulty. If the trouble is in the swelling of the buds in the autumn, then anything we can do to stop it will be a step in the right direction; to do this it seems to be necessary to keep the ground cool, so that no sap will ascend from the roots of the tree. This can be accomplished by mulching the land with a liberal quantity of any cooling material, like wood shavings, hay, leaves or brush. One of the best peach orchards we ever saw was mulched six inches in depth with white pine boughs; cedar, hemlock or even spruce brush, we presume would be equally good. Leaves make a very cool mulching, but it would be very difficult to get them in many places in quantities sufficient to mulch an orchard of any size, and to keep them from blowing away they must be covered with some other material. We have found wood shavings an excellent material and cool enough to prevent the buds swelling in the autumn. In the most of localities evergreen boughs are the most abundant material and can be obtained the cheapest of any of the above named.

When we fully understand the wants of the peach tree, there is but little doubt but that out of abundant material which our land affords we shall be able to supply them, and instead of sending south for such large quantities of peaches we shall raise a considerable portion of what we consume, and by so doing keep our money at home, and furnish work for our increasing population.

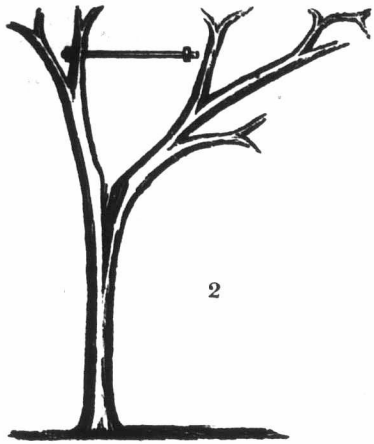
Growing Chinese Primroses.

In the cultivation of the *Primula*—Chinese Primrose—the *Gardeners' Chronicle* gives the compost used by a most successful English grower as follows: The soil is made up of well-decayed and sweetened leaf-mould, two parts; rich fibrous turfy loam, one part; with a good sprinkling of coarse sand added, to keep the whole free and porous. Later on, when the plants are shifted into their blooming pots, about one-sixth part of the cow manure, reduced to fine mould, is added, and a slight sprinkling of guano is found to be very beneficial to the plants. A thorough sweetening of the soil is considered of the first importance, and scarcely less important is good drainage, for the *primula* is very impatient of anything like a soddened soil.

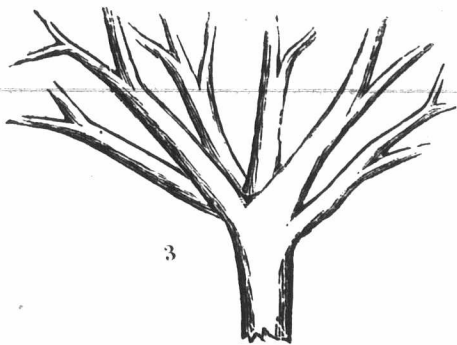
The greatest care should be taken to prevent burning under the glass. The plants should be shifted into larger pots from time to time, as they fill them with roots, being finally put into six inch pots for blooming. It is essential that the plants do not receive any check in any stage of growth. Hence it is best to buy of the green-house man plants nearly ready for bloom, unless the amateurs have good conveniences for forcing them.

Our First Snow Storm.

On the 23rd of October we had in this section a heavy fall of damp snow, the flakes being very large. The leaves were yet green. The snow was just damp enough to remain where it fell, and every leaf was soon covered. The snow continued falling, varying in depth from a few inches to fourteen inches in different localities. The snow in this manner accumulated in heavy masses on the trees, as there was no wind to move them nor frost to dry the snow. The result has been that there are more limbs broken from trees and more trees destroyed than we have seen for the past 12 or 14 years. About that length of time ago, when we lived on our farm, we had a beautiful young



orchard, some of the trees of which were so badly damaged by a similar snow storm that we thought they would be of no further use. The trees were, as many of them were at the time of the recent storm, covered with foliage and laden with fruit. One of our finest trees was split nearly in two; one-half of the tree was nearly broken off and lying on the ground, the other half was left standing. We did not like to destroy it, as it was a constant bearer, and we had not many trees in full bearing at that time. We cut off the broken half and trimmed back the other limb a little; the following season the tree put out buds on the side that was damaged. We never saw such a rampant growth of wood as that tree made on the damaged side, and it continued to force wood to replace the damage done. Now it has become a respectable



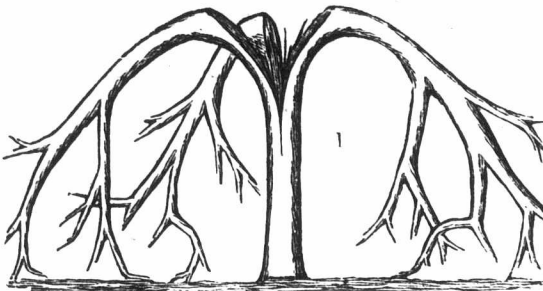
looking tree again; the great wide split that was made is now only a small flaw in the side of the tree. There are many thousands of apple trees now badly damaged; some are totally destroyed. But where trees are young, with a little judicious trimming back of limbs that are left to allow a tree to balance its head, many apparently ruined trees may be restored; if the trees are old and badly broken past recuperation, it will be best to re-plant, but if young the roots that are now in the ground will force a tremendous growth of young wood. This young wood should not be cut away the first year, although it may be ten times more dense than is required. It prevents the roots from dying back. In a year or two you can gradually remove the wood that is not wanted.

No one would believe that such an amount of

damage could be done unless they could see it with their own eyes. In one orchard near this city half the trees are very badly injured, and many are totally destroyed. We have had a few illustrations made to show the forms of trees that are most suitable to resist the heavy weight of a crop of apples or a heavy snow fall; for what has happened will most probably be repeated, and as prevention is better than cure, this lesson may be now taught with profit to all.

Cut No. 1 represents a fine tree that was growing on the O'Brien estate. We omit the foliage and show the wreck when split into three pieces and totally destroyed.

Cut No. 2 shows a half tree that in an extreme case might be made to retain its wood for bearing.



If young it would be better to cut the limb off, but in the case of a mere crack or split in the stem of a tree the plan of putting an iron bolt through the tree and supporting it may be practised with much benefit.

Fig. 3 represents a tree saved. We have seen some trees that most assuredly must have been broken down with their own fruit without the additional weight of snow, that have stood through many a heavy load and many a storm. You can easily judge, if you have a mechanical eye, trees that this system would serve, and by the small expense of an iron rod and nut you could strengthen some of yours. It only requires an augur hole bored through the two limbs, and tightening the nut. We have seen no evil effect to the trees where this plan has been adopted.

Fig. 4 shows the plan carried out which we suggested in a previous issue.

Fig. 5 represents a limb that has been made to



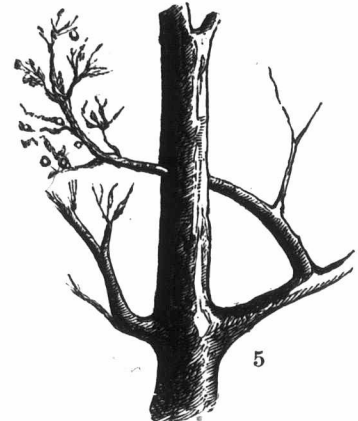
support another. This plan may also be adopted. Bore a hole through the limb of a young tree and bend a twig through it. They will grow together, and give great strength to the tree.

Fig. 6 shows the proper form of branches. This can be obtained only by a judicious pruning back of young trees which should always be done. Too many are afraid to use the knife and cut off the top of a young tree, but you may see from the above illustrations the bad effects of having badly shaped tops as well as the forms you should try to obtain. If you have trees that you are afraid of being destroyed it is far better to cut them

back or brace them properly than to let them be destroyed. When you remove the limbs that are broken, smooth the part off with a chisel, and smear the wound with grafting wax.

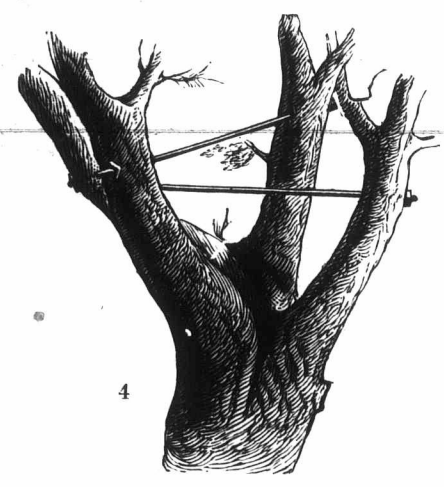
Garden Cultivation.

As to this matter, we farmers are very negligent. An acre of good soil well cultivated will supply a small family with all the vegetables and most of the fruit which it ordinarily consumes during the year, while two acres will do the same for quite a large family. Autumn is the best time to prepare the garden for spring planting, which if properly done greatly lessens the labor in the spring, and enables the gardener often to get his vegetables from one to two weeks earlier than if this previous preparation had not been made. My method is to first turn each furrow six to twelve inches deep,



according to the nature of the soil, taking care to throw up only the richer part of it, and as fast as this is done follow with a subsoil plow (of which Miner's patent is the easiest draft and very best yet made for this purpose), stirring and finely pulverizing but not turning up this subsoil, to as great a depth as the power of the team is capable of doing. Thus the fertile soil is kept on the surface from the rapid growth of the crops early in the season, the roots of which, if required, will gradually seek the poorer lower soil later in the season.

When the ploughing is finished I do not harrow, but spread coarse fresh stable manure over the soil as soon as possible. This keeps it warm during the winter, and rots by spring sufficiently well to be ploughed in. Many contend that by spreading the manure in autumn all its salts are washed out and leach away through the soil before



the time comes round for planting, and are thus lost. I do not think so, for I have had heaps of manure repeatedly composted on a soil of coarse white sand, lying there for six months, and after removing it I dug into the sand and found it only slightly discolored to a depth of two or three inches. On a good garden mould there would be only the slightest discoloring of the surface, and I think no wastage of the salts of the manure; but even if there was a little of this during winter, the loss would hardly be equivalent to the benefit of covering the soil and preventing its being injured by the sun and winds. The surface lying so rough from the ploughing, prevents any washing away by rains from the manure, as might be the case on a smooth surface when hard frozen.

Poultry.**Langshans.**

Many of our readers are interested in poultry, and are anxious to hear of any improvement in the breed or management, and of the merits of different kinds of poultry. We now introduce to your notice a class of fowls that are not often seen at our general exhibitions. We know not if any are yet introduced into Canada. We quote the following description from the catalogue of Messrs. Benson, Maule & Co., of Philadelphia, from whom we obtained the accompanying cut. They have all classes of fowls, besides many varieties of farm stock for sale:

They are more like the Black Cochins than any other breed with which we are familiar, but in reality they differ very essentially from them.

The Langshan is the latest acquisition to our poultry yards from Asia, and judging from our experience with other Asiatic breeds, their origin certainly augurs well for their future in this country. They are natives of Northern China, and

consequently accustomed to its rugged climate. They were first introduced into England in 1872, and have already been remarkably well received in other parts of Europe. In England, Scotland and France gold and silver medals have been awarded them at the shows, and their value has been favorably commented upon.

They have straight red combs, somewhat larger than those of the Cochins. Their breast is full, broad and round, and carried well forward, being well meated, similar to the Dorkings. Their body is round and deep, like the Brahmas. The universal color of the plumage is a rich metallic black. The tail is long, full feathered, and of the same color as the body. The color of their legs is a bluish-black, with a purplish tint between the toes. The average weight of a cockerel at seven or eight months, when fattened, is about ten pounds; and a pullet about eight pounds. Their carriage is stylish and stately.

The good qualities claimed for the Langshans are the following: They are hardy, withstanding readily even

the severest weather. They attain maturity quite as early as any of the large breeds. They lay large rich eggs all the year around, and are not inveterate setters. Being of large size, with white flesh and skin, they make an excellent table fowl; more especially so on account of the delicacy of flavor which the flesh possesses.

The common dunghill fowl can be improved very greatly in value if crossed with some of the improved breeds.

The best as well as the easiest remedy for getting rid of vermin on fowls, and keeping them clean afterward, is first to clean and whitewash the roosts, adding a liberal supply of salt to the wash.

The American Cultivator says: Never before in the history of the country was so large a crop of wheat planted. The area in Illinois and Indiana is from fifty to a hundred per cent. greater than that of any previous season.

Winter Quarters.

Now is the time to get your winter quarters for poultry ready. Supply clean dry earth for the floor and dusting box, and gather dry leaves to throw upon the earth on which to scatter the grain which you give your birds, so that they busy themselves scratching for it, and thereby be kept in good exercise. See that the nest boxes are thoroughly cleaned and fresh straw supplied, the perches washed with kerosene, and well scraped. Provide green food in the shape of cabbage, mangold wurtzel, and potatoes, to give when confined in the winter months, with scrags of meat and bones from your table, instead of throwing them out to be wasted. During confinement through the winter months, rake out the droppings from your birds from the earth on the floor at least twice a week. Put a dust box containing any earth, about three feet square and eight inches deep, in a sunny place, putting carbolate of lime in the earth, which destroys all vermin and keeps the birds from being worried. In fact, be clean, and keep clean, in all your poultry appointments, and your birds will pay you for all this trouble. Give up the idea that any place is good enough for your chickens, that running all over your sheds and roosting on the side of the stall, over your horses' feed box, or on the harness, waggons and

Standard Requisites for Poultry.

There are certain things absolutely necessary for the thrift, comfort and convenience of fowl stock which must be supplied by every one who attempts to raise them.

These requisites, in general terms, are a sufficient quantity of lime amongst their food, to assist in egg-shell making; plenty of gravel, which helps to digest their hard, dry grain food; a due allowance of animal substance, such as insects, meat, scraps, &c.; a moderate supply of shells, pounded bones, &c., and a full modicum of green feed constantly the year round.

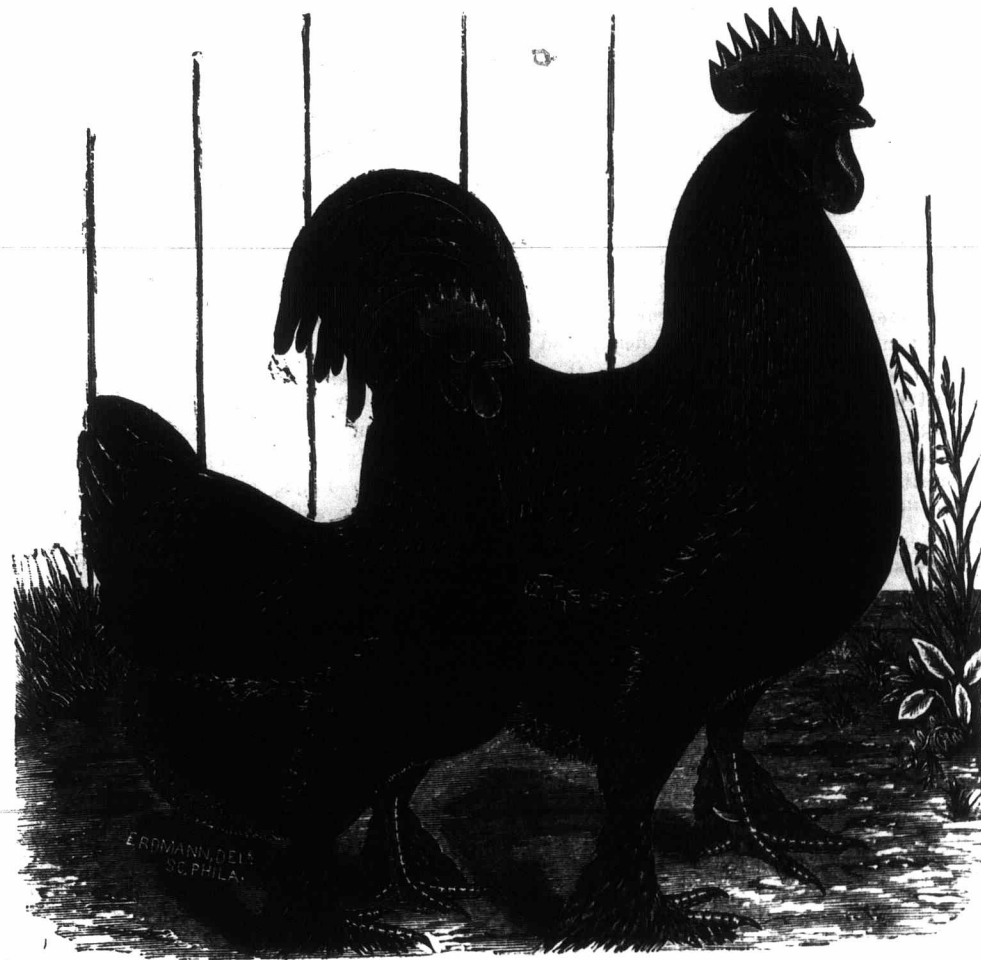
All these are necessities. And in some shape or other these must be furnished the fowls or they will not grow well. If the flocks are permitted to run at large, the birds will gather a good share of these supplies abroad, especially in the summer season. If they are confined within fenced runs, all these provisions must be accorded them artificially, or they suffer.—American Poultry Yard.

Fattening Poultry for Market.

No fowl over two years old should be kept in the poultry yard, except for some special reason. An extra good mother or a finely feathered bird that is desirable as a breeder may be preserved until ten years old with advantage, or at least so

long as she is serviceable.

But ordinary hens and cocks should be fattened at the end of the second year for market. Feeding for this purpose may be begun now. When there is a room or shed that can be closed, the fowls may be confined there. The floor should be covered with two or three inches of fine sawdust, dry earth, sifted coal ashes, or clean sand. The food should be given four times a day and clean water be always before the fowls. A dozen or more fowls may be put at once in this apartment, so that there may not be too many ready to sell at one time. The best food for rapid fattening, for producing well flavored flesh and rich fat, is buckwheat meal mixed with sweet skimmed milk, into a thick mush. A teaspoonful of salt should be stirred in the food for a dozen fowls. Two weeks feeding is sufficient to fatten the fowls, when they should be shipped for sale without delay, and another lot put up for feeding. If the shed is kept dark and cool, as it should be, the fowls will fatten all the quicker for it.—American Agriculturist.



THE LANGSHAN FOWL. (NEW VARIETY.)

wheel-barrows, and perhaps on the horses' backs, is just as good as anything else you can give them. If that is the best you can do, you had better give up keeping birds for profit, for it will cost you more for repairs in the spring upon your damaged property than they are worth. When our farmers will provide proper places to keep their fowls through the winter, and feed properly, they will get for their pains a well-filled egg basket and clean, fat fowls for market which will command good prices and pay better for the amount of money invested than any product of the farm. Be careful to keep your poultry quarters dry. Dampness has done more to bring on disease and death among poultry than any other thing, particularly when they are confined in close runs.

It does not follow, because buildings should be well ventilated, that open spaces between the boards are beneficial. Buildings should be made tight, with ventilators of proportionate size at the top.

WHEAT GROWING IN NOVA SCOTIA.—The farmers of the Maritime Provinces are successful wheat growers, and bid fair to produce, in a short time, their own flour. The *Herald* (Sydney, C.B.) says: The farmers of the County of Yarmouth are turning their attention to the raising of wheat and other bread-producing grains—and on the whole with an encouraging degree of success. The yield has been excellent, both in quantity and quality, the season has been propitious for harvesting, and the ravages of smut or weevil have thus far been things unknown.

An Ivy, if kept in the house, will not flourish unless the leaves are occasionally washed. Each plant leaf is full of pores or breathing tubes, which are closed if the plant is full of dust—thus injuring vigorous growth. Fifth-avenue mansions are often almost covered with Wisteria, which grows to a great height, and very rapidly, living out well all winter. Red-brick walls at best are unsightly, and the timely outlay of a trifle might, in most cases, make them exceedingly attractive.

Stock.**Stock in Winter.**

So far as stock is concerned, winter should be made a continuation of summer as much as can be. This should be the aim in all cases, and persisted in so as to avoid a break in the well doing of the stock. To the extent that the animals suffer, either from the weather or a lack of good food, there will be loss. Young stock will be retarded in growth, and the lack can never be supplied, as growth is confined to a certain time and never goes beyond it; hence what is lost within this period is lost beyond recovery. Among many of our farmers do we find young stock but little if any advanced in the spring from what it was in the fall—puny and in worse condition than when it went into winter quarters. This continued during the period of growth, but about half the size will be obtained. With calves and lambs this is a great loss; with colts it is a greater still. Not only is winter a drag upon the growth, but it takes a good part of the summer to recover sufficient to get well in the growing condition again. The effect of the cold upon stock is simply a dead loss; there is no compensation whatever. This is brutal and reckless. But the feed prepared for winter is open to the same objection. The hay ripe and bleached has but little substance, and what it has is to a large extent locked up in an indigestible form. Then there are the filthy stables, the inconvenience of obtaining water, exposure to the cold rains, especially in the fall and spring, and other inattention. Our winters are one of the principal drawbacks upon the prosperity of a large proportion of the farming community, all of which can readily be remedied if only the determination is there and the persistence to carry it out. Comfortable quarters and good feed sums up the requirement. It only needs tender, green hay, clover and timothy or other good grasses, and warm stables sufficiently ventilated and kept clean, which last can only be done by using fine absorbents, making thus, also, a soft bed to lie on and saving the manure, particularly its better part, the fluids.—[Cor. Utica Herald.]

Swine Disease in the United States.

The Department of Agriculture at Washington devotes a special report to the investigation of the disease of swine. It appears from the report of the Commissioner of Agriculture, that information from one-half of the countries of the United States, gives total value of farm animals lost, principally by infectious and contagious diseases, as upwards of sixteen millions of dollars, ten millions of which lay among the swine alone. About two-thirds of the work is devoted to the "swine-plague" or "hog-fever." Experiments made to discover whether the disease was contagious, also proved that it was, and that there is no safety for healthy swine which come into the neighborhood of those that are diseased. It was also shown that sheep, rabbits, rats and mice may also take the plague, and that it can be transmitted through them to other swine. The danger from rats and mice in particular is serious, as they always infest the pens, eat out of the same trough with the pigs, go from one pen to another, and are often devoured by the swine.

All of the authorities are agreed as to the uselessness of attempting to cure animals attacked by the swine-plague. It is true that they frequently recover and live, but they are always subject to a recurrence of the disease, and never again become healthy animals. The method advocated for stamping out the disease is to kill all animals which are attacked by it, to bury them deeply in secluded places, disinfect the premises, utensils and persons, keep close watch of the remainder of the herd, and as soon as any of them show signs of the disease, kill them also. But it will do no good for one man to follow these directions when his neighbors will not do the same, for his herd will still be in danger from those that surround it.

Putnam County, N.J., is excited over the ravages of the plague—a new phase of contagious disease, pleuro-pneumonia. At a meeting of the citizens of the county on Friday, Mr. John G. Bordon offered to advance ten thousand dollars towards crushing out the disease. It is supposed the disease was communicated by a drove of cattle coming from Buffalo via Albany. It is proposed to quarantine the whole county.

Cooking Food.

In an article, which we reprint beneath, from the *Germantown Telegraph*, we have additional testimony to the profits from cooking food for pigs. Some doubt if there be any profit from the cooking. The students of the Agricultural College, at Guelph, published reports of experiments carried out by them, and from the results they agreed that there was no profit in cooking. This must have been owing to exceptional circumstances, and can only be considered a mere theory from the overwhelming testimonies to the contrary. In a treatise on the "Economy of Cooked Food," published by E. Leonard & Sons, of this city, they say, truly: "Probably more experiments have been made in cooking food for pigs than for any other animals. These have been uniformly successful, both in saving of materials and in the increased production of fat." Stephens, one of the highest English authorities, says in his "Book of the Farm": "It has been found by direct experiment that pigs fatten much better on cooked than raw food. It is only waste of time and materials, and also loss of flesh, to attempt to fatten pigs on raw food; for, although some kinds of food fatten better than others in the same state, yet the same sort of food cooked fattens much faster than in a raw state." The following article from the *Germantown Telegraph* is not mere theory. It is a carefully prepared report of facts given by a practical man:—

"Several years ago I fed eight shoat pigs for several months with corn and oats, ground together and made into well-cooked mush. They gained in weight at a rate, counting pork at the then market price (seven cents per pound), sufficient to make double the market price for the grain consumed. Much of this gain was due to the cooking of the food. The following winter I weighed and put into separate pens two sows, sisters, and in the same condition, having both recently weaned a litter of pigs. Number one weighed two hundred and ninety-two pounds; number two, two hundred and eighty pounds. I fed number one on cooked shelled unground corn for seventeen days; she consumed two bushels and twenty-one quarts, and gained thirty-six pounds. Number two fed same length of time on unground raw shelled corn; she consumed three bushels and thirteen quarts, and gained thirty pounds. Now, as it is said it will generally pay to make pork at ten pounds to the bushel of corn, as when corn is low pork is low, and vice versa, then a gain of five pounds of pork to the bushel (after deducting the expense of cooking) is quite an item and should induce more experiments in this line. The above experiment in cooking was with unground corn. Ground corn cooked and made into mush gives, according to experiment, considerably more profit than whole or unground corn cooked. After satisfying myself by several experiments I bought a small steamer, fixed it up in brick-work, and set a vessel holding some fifty gallons on each side the steamer, from which a pipe entered each vessel; water was run into these vessels from a fountain pump, which was readily heated by the steamer. Then I emptied in two or three bushels of ground corn and oats, or corn and bran, stirred it a little with a plunger; and after leaving it to steam awhile it would swell up and thicken so that sometimes we had to take it out with a shovel. We sometimes cooked shelled corn without grinding. I followed cooking feed for my hogs, from thirty to two hundred of them at a time for fifteen years, and considered it a great saving of grain. The steamer cost thirty-five dollars, and fixing up not quite ten.

Subscribers would do well to procure Leonard's "Economy" referred to above, and form their own judgment.

Cotswold and Southdown sheep formed the principal exhibits at American fairs this season, and an increased interest is manifested in these once neglected sheep; their profits are becoming better known and their value on every farm is now conceded, which accounts for the great demand for good sheep.

Bog-Spavin and its Treatment.

In reply to an Old Subscriber as to the treatment of Bog-Spavin, the following item from Farm and Field contains the required information: Bog-Spavin is of two kinds, both of which present the same outward appearance, so far as the puffy swelling is concerned, but they differ in the important point that in one there is inflammation, tenderness and lameness, while in the other there are none of these, and only an inconvenient blemish results. It is necessary, therefore, to distinguish between these two forms. The more serious is that caused by inflammation of the hock joint; this may occur from over-work, rheumatism, sprains or bruises. There is a soft swelling of the inner, fore, upper part of the joint, where should naturally be a hollow. Sometimes the swelling occurs upon both sides of the joint, and on pressure upon either side the swelling is pushed through the joint, and increases upon the opposite side, fluctuating back again when the pressure is removed. This is "thorough" pin. The lameness in this form of the disease is similar to that from Bone-Spavin, and in its result it may produce the worst effects of that disease, viz., ulceration and bony deposit, with a permanently stiff joint. The less serious form of the disease is a simple swelling, which appears to be the same as the other form in all respects, excepting that there is no lameness, heat, or tenderness. The cause is an excessive secretion of the fluid which lubricates the joint, which produces the soft puffy characteristic swellings; and this may occur from over-exertion, or a dropsical effusion from constitutional weakness.

The first treatment, in the former case, is to reduce the inflammation, and exert an easy pressure upon the swelling, to induce an absorption of its contents. In the latter case, the pressure, with cold applications, are sufficient. These, in both cases, may be accomplished by using a padded bandage fastened above and below the hock with straps. This may be made by any person in a few minutes, from some strips of stout leather, a few rivets, and two buckles. The pads may be made of pieces of sponge, wrapped in wash-leather or buck-skin or sheet-rubber. The upper strap is buckled loosely around the leg, above the hock, to prevent the bandage from slipping down, as it is held by the side straps. The lower strap is provided with a pad, or one for each side, placed so as exert a steady pressure upon the swollen parts. At the same time, cold water dressings are applied, or astringent applications, such as weak mixture of tannic acid and water, or an infusion of white-oak bark. The lotions may be made more effective, as regards coldness, by the addition of ice or a small quantity of salt-petre to the water. Rest is necessary during the treatment, and unless the causes that produced the trouble are afterwards avoided, it will be necessary to soon repeat the application.

Increase of Steers on Pastures.

One of our subscribers wishes to know what a steer weighing 750 pounds should gain on good pasture, during the full grazing season. Like all farm questions, there are many conditions to be taken into consideration in answering this question. The character of the pasture will vary much between a gravel hillside and a blue grass plain. A wet, cold season may be contrasted with a hot, dry one, the happy medium being, of course, better than either.

Again, the steer himself will cut a considerable figure in the point of profits. A scrub steer raised in a half or three-quarters starved condition from calf-hood will not fatten with half the ease of a grade or full blood Shorthorn that was never allowed to lose his calf fat.

It is the selection and combination of these points that make the successful grazer. A steer at three years of age that weighs only 750 pounds must be only an average native in quality, and, on average pasture, with an average season, would not take on three hundred pounds.

In going to market a long way he might lose fifty pounds of this in "drift." Shorthorn grades often take on five or six hundred pounds in the same time, under favorable conditions.—[American Dairyman.]

Sheep that go into winter quarters in a declining state will demand extra feed and care during winter, and produce a light clip of wool in the spring.

Agriculture.

Robbing the Soil.

That the wheat producing soil of the United States is rapidly losing its fertility is no longer a matter of doubt. Such is the testimony of American agriculturists as well as English statesmen. The American Cultivator, Boston, is no mean authority on the subject. We here reproduce the leading article from its last issue:

Only a few years ago the agriculture of the East was self-supporting. We raised enough of corn, wheat, beef, and every commodity, for our own use. Stately and comfortable farm homes were found all over New England, where was present the largest amount of comfort and independence. From the State of Maine cattle and wheat were both sent to Boston market in large quantities. What is now seen in many places in Eastern and Northern New England, where once were these large farms, but weed-overgrown fields and dilapidated farm houses and barns. Young men, comparatively, of the present day, can remember when flour began to be purchased from Genesee and corn from Virginia. Then Ohio was in the Far West. To-day, one of the leading questions among Ohio farmers is how they shall restore the exhausted fertility of her soil. Farms in the State, which twenty years ago would carry twenty-five cows, are now hardly able to support half of that number. What has caused the impoverishment of this once rich soil? Why is not the valley of the Genesee to-day, as it was for years regarded, the granary of the East? A depleting and thoughtless system of land-skimming answers. The crops of corn, wheat and tobacco, and the cattle and horses grown in such abundance upon the productive virgin soil, have robbed it of its ability to longer yield remunerative crops.

The farms have been sold by the bagful and baleful; they have been transported by rail and ship and team, to near or distant cities, leaving a barren soil that can only recuperate itself by a long period of rest, or be accomplished by the farmer at an expense almost too great to be undertaken. And westward the system of eastern spoliation has been transferred. The grand prairies are now contributing of their life-blood the food needed by a hungry world, yet men think their fertility inexhaustible, and forgetting the lessons of old-time farming in the East, say the land of the West is never to need artificial plant food, it will always produce. It will not always produce the crops and the stock it is producing to-day. Let us be philosophers. Is it not reasonable to expect, to believe, that the same course which has brought agricultural dependence to the East, will also bring it to the West, however fertile the West may be? There is a limit to all natural fertility—that limit is only measured by time. In improvident farming, especially, the future is sure to reproduce the past; for the same conditions and agencies that have brought it about in the one case, are at work to bring it about in the other case. Nature self-executes her own laws.

It would seem that we of this generation ought to have gathered wisdom from the experiences of the past. But we have not. Had we done so there would have been manifest a more positive principle of economy in using the fertility of nature and a desire to restore wasted resources, and to leave to future occupiers an unimpaired soil. But there are few evidences at the West of providence in agricultural operations. The soil is being sent across the ocean in wheat and beef. The experiences of the Genesee, the Ohio, the Wisconsin farmers are being repeated, and in less than a hundred years the story of devastation will have a sad meaning to all prairie farmers of America. Why not stop? Why not be philosophers? Why not save manure! Why not husband nature's resources? Why not adopt now that well-balanced system of cattle feeding, sheep husbandry and cropping which shall maintain our land in good condition, at the same time it gives a fair return for the demands made upon it?

Now is a favorable season for working in the swamps. The ground is dryer than at other times, other work is not pressing, and the interval between the present time and the winter is sufficient to drain the muck and free it from the greater part of its water.

Agriculture in England and America—
A Contrast.

For many years I have argued that the whole of the United States would be more prosperous, and the farmers be able to take life easier and make more money, if they would not cultivate so much land. I have continually written about the permanent grass lands in England, which pay a great deal better for lying perpetually in sod composed of all the best native varieties, and never plowed. This is no new thing, or any experiment on a small scale, but a glorious fact on such a magnificent scale as to astonish every American who goes to England. He finds that more than half the kingdom is religiously set apart and held sacred from the plow, and hay is made of such fine quality as to surprise men who have been accustomed to think that old grass in England was all pastured. When it is considered that in addition to half the country being in permanent grass, there are clover and other grass crops which come in rotation on the arable land, and also that one-sixth to one-fourth of all the plowed land is in roots every year, all which are eaten by cattle and sheep, it is not wonderful there is so much wheat and barley grown.

The best land in England is in grass, such as farmers here could not resist the temptation to take wheat from. If such land could be kept from being polluted by cultivation here, sheep could be kept as they are in England. The less money obtained for hay and grain the better it would pay the stock-raiser to graze and grow meat, wool and milk. When a farmer has a fine tract of land, chiefly pasture and meadow, his expenditure in labour is comparatively a mere trifle, and in England this is so well understood that any farm with the greater portion in old grass is sought after and is rented readily. Let every farm with soil suitable for permanent first-class grass be treated as English land is in the best districts, and I would wager that more than double the grain, corn and clover could be grown on the half of the farm. The other half (in grass) could be the best and cheapest soil. The grass land in the Eastern States is that which will not pay to cultivate for corn and grain.

Let any farmer who reads the papers and has common sense views of agriculture consider that although Mr. Mechi, who has a wonderfully good arable farm, has been telling the landlords and the tenants that they ought to agree to plow it all up and bring it into rotation with grain &c., and consider also that the greater part of the Scotch farmers are averse to permanent grass and know little about it, yet under all trying circumstances it is still held inviolable, and instead of plowing it up when hard times come, more is sowed down in properly mixed seeds, to be kept always in grass. When grass is low in price it is folly to talk of plowing up grass which is paying by supporting live stock; and if half of the land, and the best half, is put into grass and never plowed again, the other half would grow more grain than the whole did before, thus saving the labor of attending to the whole. Of course this would not occur all at once; it would gradually happen, because all the best land being in grass, the other would be attended to and improved.—[Country Gentleman.

Cultivation of Oats.

A Wentworth county farmer speaks as follows respecting the cultivation of oats:—"When the duty was put on that grain by the recent tariff the farmers of this county sowed large quantities of it. The returns from the threshing machine show a most encouraging result, fifty bushels to the acre being the average; seventy-five being frequently obtained, and in one instance ninety bushels per acre was realized. The highest average of wheat in this county this season was twenty-five bushels per acre, and when the cost of growing a bushel of wheat is compared with that of the same quantity of oats, it will be found that the oat crop will pay the farmer nearly double. There is another great argument in favor of the growing of oats. Its straw when properly saved is equal to ordinary hay, and some of the farmers have gone so largely into stock raising that it will be found an important article of food. The oat crop is a pleasant one to handle. It is easy to bind and store, and is threshed for two cents a bushel, while wheat costs one cent more.

The Geological Survey has made important discoveries of coal and other minerals in the North-West Territories.

Draining Low Land.

A convenient method is to dig out a broad drain 3 or 4 feet deep from the highest to the lowest part of the swamp. The muck may be thrown out upon the bank upon one side only either in a continuous row or in heaps; the latter is a better way, as it offers no obstruction to the escape of surface water into the ditch. After this ditch is finished others may be dug from it to intersect any low places that are softer or wetter than others, or to cut springs, or in case there is no especial need for any particular direction for the drains, they may be laid out at right angles with the main drain, and at distances of from 60 to 100 feet apart. A drain three feet deep and six feet wide will yield more than a ton to the running yard, and 100 loads can be procured from 100 yards of ditch. The muck can be dug by contract at 15 to 20 cents a yard, or less if it is free from water and not filled with roots. A cubic yard of fresh muck free from sand weighs about 1,600 pounds, and two yards will weigh a ton after having been dried for two months, but two yards will have shrunk to two-thirds or one-half that bulk during the drying.

Muck may be used for bedding, for which purpose it is cool and very absorbent. The manure thus made is fine, and may be spread with the harrow. During the fermentation with the droppings of the cattle it is decomposed, and adds an equal value, at least, to the manure. It may be used very liberally, so as to absorb perfectly all the liquids from the animals, and in doing this it will effect a most valuable service. After one year's constant use of it we are enabled to speak positively as to the convenience of this substance and its great economy as a means of saving liquid manure.

It may be thrown into the yards to form a substratum for the accumulation of manure during the winter, and into manure-cellars as a disinfectant and absorbent of disagreeable odors. As the manure accumulates, it may be drawn out and spread upon the fields during the winter with advantage. In addition, it may be composed with refuse lime or wood-ashes with great advantage, in which condition it will be of great service as a top-dressing for meadows and pastures. The coarse fibrous portions and the sods and tussocks from the surface may be thus disposed of. Fortunately, there are many farms which have more or less muck upon them, or are so situated that the owner could procure a supply for the digging of it, or making the drains for his less enterprising neighbour.—[N. Y. Times.

Farmers' Clubs.

The Massachusetts Ploughman is a strong advocate of the formation of Farmers' Clubs, and states some of their advantages as follows:

The benefits of such a club may be summarily told as follows: It makes common property of the wisdom and experience of all the members. The isolated farmer draws his conclusions from his own limited reading and observation. Hence the varied opinions and practices of an agricultural community. One tops his corn, another cuts it up by the roots; one does his haying in June, another never cuts a spear of grass till the seeds are pretty well developed; one sets his milk in shallow, and another in deep pans; one digs his potatoes as soon as the tops die, another defers the potato harvest till cool weather; one ploughs under all his manure and another places it near the surface; one keeps his meadows perpetually in grass, and another ploughs and re-stocks every few years, and so on indefinitely.

Seldom can two farmers be found whose opinions will agree even on the most common topics of their calling. Each is apt to follow the practice of his father, and from his own limited experience thinks he is right. Now let them come together, and with candor state facts and compare views and practices, and their knowledge will be increased, and their practice modified accordingly. Two heads are wiser than one, always provided that one head is willing to learn from the other.

A correspondent of the Country Gentleman says: "Good manure requires that the animals be fed with food rich in the elements which we wish to predominate in the manure, to feed the plants which we wish to cultivate; and when we have obtained such manure, care must be taken to make the most of it. The fertilizing quality of manure is not improved by exposing it to rains, sunshine and winds, allowing the salts to be dissolved and washed away. All manure preserves its enriching qualities best by being sheltered until applied to the soil, or mixed therewith,

Fall Wheat.

From all parts of the country we receive reports similar to the following, from the Oxford Tribune:—

Never in the history of this part of the country has the fall wheat been known by even the oldest farmers to be so far advanced in growth before winter as it is this season. In some parts bunches measuring from twenty inches to two feet from the root to the tip of an extended blade can readily be found in fields sown in the earlier part of the season. Many farmers were feeding it down, as they believe the top is too heavy to remain sound under a heavy covering of snow, and some are even plowing it under. In a climate like ours, where changes are so sudden, it is pretty hard to tell exactly the best time to get the wheat in the ground, but, as a rule, from the tenth to the fifteenth of September is considered about the proper time. The steady warm growing weather with which we were favored this year in October may never be repeated in the history of those who experienced it. Although the mercury was between eighty and ninety on the 22nd, and everybody wore their summer clothes, yet before the evening of the 24th it fell to about forty, and overcoats and underclothing were in demand.

Elmira Farmers' Club.

From the report of the E. F. Club, in the Hus-bandman, we abridge the following items:—

Sugar from Sorghum.—Gen. Le Duc has been making personal examination of the sugar interests in the west, where he found evidences of real progress in sugar making. Writing to the Elmira Club he says:—"Having made an inspection of sugar-boiling among the farmers and manufacturers throughout the west, I do not hesitate to say that it is a complete success. As an evidence of this the Crystal Lake works north of Chicago have, this day, (Oct 23) ready for shipment a car load of most excellent sugar, to be placed on the market, and this will be followed by another car load this week." With the encouragement of success now attained, it is reasonable that the next year will witness extended planting of amber-cane and sweet corn throughout a whole district.

Wood ashes as a fertilizer for potatoes.—A letter to the Secretary of the Club says:—"For a fertilizer for potatoes you recommended wood ashes, which I used, and found that they increased the yield, but there were more rotten potatoes where they were applied than where the planting was on inverted clover sod. I have found that to cover potatoes four or five inches deep with straw or coarse manure, will give the best results. I planted three acres of clover sod, ploughed in spring, and a part of it being very stony, I covered it with straw to save cultivating among stones, and the result was that the potatoes were larger and more of them in the hill. Planted the potatoes in the usual way, covering about four inches deep, and in digging all we had to do was to pull the tops and take away the straw, and these were the potatoes clean and good.

Winter Rye.—G. A. Russ writes to the Club, telling his experience of growing rye, and adds:—"The conclusion we arrived at was, that if the field and its conditions were promising for a good winter crop of wheat or rye, having the ground thoroughly fitted, it would be safe to sow with oats, or other spring grain, the usual quantity of rye to the acre in addition, and the rye would not be in the way of the spring crop sowed, and the following year we should be able to harvest a good crop of rye without further trouble. By sowing the rye early in the spring without other grain, and after it got big enough so that it would do to feed, pasture it; or sow in the fall previous and have it live through two winters, and pasture it one season and harvest it the next, and have it done well. I think it would be safe to try the last two methods on a small scale, and the first I have no doubt about.

BET SUGAR FOR CANADA.—The following is from the Windsor, N. S., Mail: "The State of Maine Sugar Beet Refinery has offered to invest capital to the amount of \$400,000 in erecting a refinery in Nova Scotia, provided that the counties of Annapolis, Kings, Hants and Colchester will guarantee each to put under cultivation 1,000 acres of land for raising sugar beets.

The Rat River Mennonites have raised 180,000 bushels of grain this year.

Texas and English Farmers.

From an American paper we extract the following pithy article. Will those so-called Canadians whose great delight it is to malign this Canada of ours, take notice of this revealing of secrets?

An attractive advertisement appears daily in the London papers, offering the freehold of farms of eighty acres for sale at less total cost than one year's rental of the same would be in England. "Rich land, mild climate, good markets for produce, and a house all ready for occupation"—these are some of the additional inducements offered. What more could an impoverished English farmer want than a cheap eighty acres of rich land, in a genial climate, with good and available markets for his produce? At least so thought a number of sturdy yeomen who bought their farms and paid their passage to New Philadelphia, Texas. They arrived here recently, and, nothing suspecting, went on their way westward rejoicing. It now appears that they have been grossly deceived, if not actually swindled. The land which they went out to cultivate proved to be absolutely worthless for agricultural purposes—dried up, barren and unproductive. The settlers to whom they took letters of introduction had long since left the place in disgust. Without proper irrigation—a most expensive operation, and entirely beyond the means of these farmers—nothing could be done, and very little with it. The most necessary thing in that part of the country is water, and it is the scarcest. In short, through the misrepresentation of the agent, they were led to expect as the advertisement implies, rich and productive lands, instead of which they found a very poor grazing country.

Many Crops and a Variety of Stock.

It becomes more apparent every day that the land occupier's income must come, not only from one or two large sources, but from a number of smaller ones also. We must have many crops and a variety of stock, and must learn how to make the most of each and all of them. The times when merely to get a farm was to be on the road to wealth are gone probably forever. All that can be looked for now is that he who takes a farm may get a fair percentage on the capital he had to commence with, if he follows the road to success adopted by men of all other professions.

The road to success means almost invariably an unwearying attention to detail. Genius (someone said) is an infinite power of taking trouble; and success means genius well applied. Cereals can only be made to pay by the greatest possible care in choosing the varieties best adapted to the land and markets, and cultivating them with a special eye to get quality. Cattle can only be made profitable by those who condescend to watch their peculiarities, to develop the valuable ones, and to take care, in selling, that they get market price for all they have to part with. There must be no mere guesswork, no rule of thumb; we must learn to recognize the best methods of breeding, feeding and marketing, even though we have to abandon our long-established practices.—Agricul. Gazette.

POTATOES IN QUEENS CO., NEW BRUNSWICK.—Of the Hamstead Fair, the St. John's Telegraph says:—"The exhibit of potatoes could not have been finer; splendid varieties of Early Blue, Bradleys, Marquis, Early Rose, Prolifics, Black Kidney, and others were exhibited, and competent judges pronounce that they were super. The potato yield in Queens and Sunbury this year has been unusually large. On Senator Wilmot's farm in Lincoln, the yield is 450 bushels to the acre. John Ferris, Esq., has dug 1,500 bushels, and expects to dig 500 more. Mr. I. C. Burpee, of Chipman, planted in the spring 12 barrels, which have yielded 464 barrels.

A farmer says: "Four years ago my barn was fearfully infested with rats. They were so numerous that I had great fear of my whole crop being destroyed by them after it was housed; but having two acres of wild peppermint that grew in a field of wheat, it drove the rats from my premises. I have not been troubled with them since, while my neighbors have any quantity of them. I felt convinced that any person who is troubled with these pests could easily get rid of them by gathering a good supply of mint and placing it around the walls or base of their barns."

Top Dressing Fall Grain.

The present season has been unusually favorable for the Fall-sown crops. The warm weather, preceded by copious rains, which put the ground into good condition for the best preparation, has forwarded the wheat and rye admirably. It is now a question which may well be considered how the condition of the crops may be maintained. The soil has been drawn upon very closely by the forcing of the favorable weather, and poor soils now carry a verdure which it is scarcely safe to expect them to maintain when less favorable weather arrives, as it must soon, as a matter of course. Then the plant will need support to resist untoward circumstances, which will not furnish to the soil the ability to loosen still further its fertile elements for the support of the plants. Cold is not favorable for chemical action, and as soon as the unusual warmth of the season departs we may look for a stoppage of the present vigorous growth, because the soil cannot respond, under the unfavorable circumstances, to the needs of the vigorous crop. Hence, the healthy color will disappear, and the deep green will give place to sickly yellow. More especially when the plants are infested with the fly, whose attacks can be borne patiently while the growth is rapid and the cells are full of sap, but which become destructive when the vigor is lessened, will the change become apparent. To avoid all this is of the greatest necessity; and the use of a moderate dressing of artificial fertilizer will supply precisely the stimulant needed to preserve the crop from damage. Two hundred pounds per acre will be sufficient, of any of the standard superphosphates. These fine fertilizers will at once become available, and, if spread before any harm is done, may prevent damage which can scarcely be repaired afterward. They possess the advantage of being easily spread upon the crop without trampling over it or cutting up the surface with horses and wagons, for which reason top-dressing with manure, even were it on hand for the purpose, might do more harm than would balance the saving in the cost of the fertilizer.

Top-dressing with manure is best done during the winter, and we prefer to do it with sleds on the snow rather than in the fall. Unless the manure is very fine, and is evenly spread, it will cover up injuriously much of the plant. When spread in the Winter, on the contrary, it acts as a mulch and a protection while the plant is dormant, and in the Spring, when sudden changes of temperature, with all that these imply, occur and act destructively. Then, the covering prevents thawing and freezing in sudden changes, by which the roots are broken and destroyed and the surface is strewn with winter-killed plants.—N. Y. Times.

Samples of Manitoulin Produce.

Mr. John Emery, township of Gordon, last spring planted one bushel and a peck of Early Rose potatoes, and has gathered 45 bushels therefrom. W. Hall, of the East Range, raised an Early Rose potato weighing three pounds neat, but this has been eclipsed by Mr. Woods, of the West Range. Mr. Woods says he has brought into the village thirteen potatoes, the total weight of which amounted to 39lbs. 12oz. Mr. Woods also brought to the Gore Bay Mills a quantity of barley, the like of which has never before been seen on the Manitoulin. The shell is black, with a very smooth skin, while the kernel is as white as the general run of barley. This barley is said to be very prolific. Mr. Woods sowed three-fourths of an acre last spring, and harvested thirty bushels of clean grain as the result.

According to an experiment made with potatoes and corn last season by Mr. S. B. West, of Columbia, Conn., the butt ends of potatoes, and the kernels of corn from the butt ends of the ears, each produced crops that were materially better than where the opposite course was pursued. In the case of potatoes, the stalks from the butt ends were much the larger and more forward at the first hoeing. The increase in the corn was some twenty per cent. in favor of the butt end kernels.

CHESTNUTS.—Six years ago, says the Fruit Recorder, we transplanted some seedling American chestnuts in a nursery row, and this season they have a number of chestnuts on them. Such a return is encouraging to those who wish to have a small grove of these handsome and favorite trees.

The Apiary.

Wintering Bees.

BY C. F. DODD, NILE, ONT.

I think there is not one subject in connection with bee culture on which there has been so much diversity of opinion as that of wintering bees. Some apiarists advocate one thing and some another, and it would be very strange indeed to find us all of one opinion. However, I think we will all agree that bees require protection against the inclemency of the weather, consequently they are taken into bee-houses, cellars, &c., and if everything is favorable they come through the winter all right, and are placed on their summer stands as soon as the snow is gone in the spring. Now one would naturally suppose they should be all right after passing the winter safely, but that is where the trouble arises. Hundreds of bee-keepers have said they could keep their bees through the winter, but they died in the spring, and they did not know what killed them. In the first place we will suppose the bees are in a box hive, or in a single-boarded frame hive, and are placed in a cellar during the winter; when spring arrives they are placed on their summer stands with nothing but an inch board to protect them from the sudden changes of the weather which is sure to take place at that season, when one day may be warm and the next cold. Now the animal heat must be kept up in the hive to sustain life and to enable the bees to carry on their labor, such as brood-rearing, &c., to maintain the strength of the colony, and this must be done by the bees consuming a large amount of honey, and the bees being compelled to consume enough food to keep up the animal heat take a disease called Spring Dwindling and die off gradually until the hive becomes so depopulated that they either swarm out, fall a prey to the bee moth, or are robbed by other bees. But this is not always the case, although hundreds of swarms perish every spring in the way I have mentioned, and there seems to be no remedy for this disease after it has commenced that we have found of any benefit. The only cure for it is warm weather and new honey, and before they arrive the swarm becomes so weak that it takes nearly all summer to regain sufficient strength to cast a swarm or gather surplus honey. Now if the bees are placed in a hive so constructed that it may be packed on every side with about three or four inches of chaff or sawdust, and a chaff cushion placed on the top of the frame to absorb the dampness from the hive, the bees will not be affected in the least by sudden changes of weather, and they will therefore swarm much earlier and perform almost double the labor they would otherwise have done had they not been protected.

Bee-keepers in Council.

At the opening of the ninth annual meeting of the National Bee-keepers' Association in Chicago, October 21, President Newman, who has lately returned from an extended visit to the apiaries of Europe, in his opening address referred to the past disastrous winter and the present unfavorable season, and said that in Europe utter failure is general, while with us, if we except California, there has been a fair success, and the better prices will go far to compensate for the poverty of the season. Mr. N. remarked that he had found much prejudice in Europe against American honey, which he tried to overcome. We have already sent 180 tons of comb-honey and many hundred tons of extracted honey to London, much of which has been sold at great prices. Yet this is but a drop in comparison with what will be exported in the near future. Switzerland stands first in advanced apiculture in Europe, England second and France last, but all Europe is away behind. Mr.

Newman said we must strive to make our market more stable and uniform. Soon a great foreign demand will solve the whole question of market.

Reports from delegates showed that the honey crop has been a failure in California, and from one-fourth to two-thirds the usual amount in the remainder of the country. The best report was from Canada. Mr. D. A. Jones, Beeton, Ont., the largest apiarist there, reported 250 pounds per colony, one-third comb. He wintered (in cellars) 500 colonies, and always with perfect success. Good feed, strong colonies and late breeding in autumn were emphasized as of great importance. About half of those present, as was shown by vote, favored chaff-pecking on summer stands, the other half cellar wintering; all favoring some kind of winter protection.

Mr. Frank Benton expressed the opinion that the next advance step in American apiculture will be the introduction of Cyprian bees, which are claimed to be superior; first, in brood-rearing; second, greater activity; third, they are more prolific; fourth, they winter well and suffer less from spring dwindling than other bees. They are of the yellow type, and unexcelled in beauty. These conclusions, the speaker said, were based on experiences of foreign apiarists whose only desire is to promote truth.

Prof. Hasbrouck, of New Jersey, reported successful fertilization in confinement. He placed the queen and selected drones in a sugar barrel all closed except a small opening in the upper head, over which was a glass; queens were at once fertilized. Several others reported success in the same direction.

Prof. A. J. Clark reported some very interesting experiments of practical value concerning the bee's tongue. He found the length to vary from .23 to .27 of an inch. The longest were from Italians from an imported queen; next came American-bred Italians, then German bees of Europe, and shortest of all were our American black bees. The speaker demonstrated, by an ingenious device, that this superior length of the Italian's tongue is a matter of considerable importance. He made a box half an inch deep without top or bottom. This he covered with gauze which had 15 meshes to the inch. He then placed a pane of glass in the box, one end of which rested on the gauze, the other resting on the edge of the box $\frac{1}{2}$ inch from the gauze. Honey was spread on the glass, and the box put in Italian hives, and also in hives with black bees. The black bees would clean the glass for 19 meshes and the Italians for 24 from the edge where the glass rested on the gauze. Thus it is proved that the Italians can reach down deeper in flowers, and often gather from sources entirely inaccessible to black bees. The speaker regretted that he had not had opportunity to measure the tongues of undoubted Cyprians; natural selection, the law that had raised the Italians so high, had quite likely done even more for the Cyprians, through the severe competition which must exist on so limited an area as the small Island of Cyprus.

Mr. D. D. Palmer, of Illinois, told how to prevent swarming. He would not stimulate in spring by feed; would have opposite entrances to the hive to give ample ventilation; would shade the hives, and freely extract and put on honey boxes at dawn of clover season. The first swarm, if they do swarm, is generally useless to put back; second swarms should be prevented by destroying queen-cells, and if they come out through neglect he would always put them back. Mr. Sherman, of Michigan, and Mr. Dart, of Wisconsin, would put the swarm in the hives which last swarmed. This satisfies the bees, gives large colonies and prevents increase. Of course the cells in the hive should be destroyed. Mr. E. J. Oatman rears his queens in a lamp-nursery and introduces them just at hatching.

Mr. N. P. Allen said that bees, if to be moved only a short distance, should be drummed out and then hived in the new position. To transport bees we should first fasten the frames so they will not move, give abundant ventilation and carry in a spring waggon. Mr. Bingham said bees can be safely moved any distance after brood-rearing has ceased in the fall. Mr. Dadant moves bees at any time, and for any distance, by simply placing a board over the entrance, a short distance in front of the latter. Mr. Winslow said this would make it safe to set bees on any stand when removing them from the cellar in the spring. The bees then mark their line and return to it, rather than to its former position.

Veterinary.

Worms in Horses.

SIR,—will you kindly give me the best treatment for horses suffering from the presence of long white worms, about the size of the stem of a pipe, and seven or eight inches long. The animals are hardworked farm animals and in low condition.

A WORKING FARMER.

[We give you the reply of the Agricultural Gazette, England, to a somewhat similar query: The worms in question belong to a group of parasites sometimes termed round worms. They infest the alimentary canal of all solipeds. In the small intestines it is frequently formed in very large numbers. We have counted in this gut as many as 1,800 specimens in one horse. Not unfrequently the large intestine, and, rarely, also the stomach, contain these parasites in small numbers. In color they are yellowish white, thick in the centre, and tapering towards each extremity. The full grown worms measure about seven or eight inches in length. The female, however, sometimes exceeds twice this length. Having regard to the size of these creatures, and also to the fact that they usually exist in large numbers, it is not a matter of surprise that a hard-worked horse should, when infested with them, become weak and emaciated. Practically it is important to point out that the young or larval form of this entozoon is usually introduced into the system through the medium of either food or water. Stagnant pools in the vicinity of stables and farmsteads are fruitful sources of infection, and, in the case of an outbreak of parasitic disease, should be scrupulously avoided. The water supply should be drawn either from a pump or running stream, and the pasture on which the diseased animals have been turned should be regarded as infected, and grazed for several months by sheep and cattle. With regard to treatment, grass diet should be discontinued, and a liberal amount of corn and other substantial fare allowed. The animals must be eased in their work, and good general management adopted in order to fortify the system against the debilitating influences of the parasites. Take two ounces of turpentine and one pint of linseed oil; this may be given in the morning fasting, and repeated in eight or ten days. Should this not have the desired effect repeated doses of Santonine may be resorted to, under the direction of a good veterinary surgeon.]

Disinfecting Stables.

Disinfection of stables, drains, sheds, cesspools and outhouses should now be attended to, says a writer. The value of disinfection is no longer a subject of discussion. All malignant maladies have been stayed in their ravages by a free and constant use of the potent agents of disinfection. The walls of the stables should be whitewashed. In every livery stable there should be a bucket of sulphate of iron (copperas). Take a handful every morning, dissolve in a bucket of water and throw into the drain. It is cheap and effective. So is the chloride of zinc (butter of zinc); dissolve an ounce in two gallons of water. Where there are sick animals the sheds and stables should always be fumigated with sulphur at least every other day. If mixed with tar the gases generated are very active disinfectants. Take flour of sulphur, half a pound; wood tar, one quart; mix with tow; burn at one or two spots and this will disinfect a large stable. Carbolic acid is a powerful disinfectant and should be applied to doors, walls and troughs. It is disagreeable to flies. Blankets should be wet with a solution of it to destroy all disease germs. Chloride of lime is another popular disinfectant. Disinfecting powders (preparations of carbolic acid) are sprinkled daily throughout the stables of London and Liverpool at an annual cost of only \$1 for each horse. They keep the flies away and the atmosphere pure.

HORSE DISEASE IN NEW YORK STATE.—Within a few days the Oneida community has lost several horses by a disease which broke out suddenly and proved alarmingly fatal. Eleven other horses have been attacked. Stagnant water near by is thought to be among the causes bringing on the disease. It is thought the entire large stock of horses may be more or less affected. When will the owners of farm stock take the needed precautions for their health? The losses from stagnant water are incalculable.

CORRESPONDENCE



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Nova Scotia Provincial Exhibition.

SIR,—This Exhibition, which took place at Halifax from Sept. 29th to Oct. 3rd, was quite a success. It was one of the best, if not the finest, ever held in the Province. The citizens of Halifax, combined with the committee and farmers, were determined, if possible, to make it such, having offered a larger sum for prizes—which always tends to swell the number of entries and brings more competition to the front; also having just erected a very fine exhibition building, which gives credit to the cause it represents and to the city to which it belongs; its general appearance is very prepossessing.

The weather was about all that could be desired, fine and dry, though rather warm. The visitors had pleasing countenances, not the haggard look of fair day when mud is knee deep. The main building would be a credit to many of the large Exhibitions in Ontario. The accommodation for stock was not at all equal to that found at Western Exhibitions, the horse stalls being all open, without means of enclosing in case of bad weather or at night. This, no doubt, will be improved in time. The display of horses was very inferior, and the judges' decisions would not tend to improve matters, as they had the horses trotted out and awarded the prizes solely on speed, never leaving their stand to examine a horse in regard to soundness or size; beauty, endurance or utility were not considered—speed was the only quality wanted to take a prize. This system has filled this part of the country with a lot of cheap, small scrubs of horses. The loss to the Province from having such a class of animals must be immense, as they are not the class of horses that bring good prices either in the English or American markets.

The show in cattle was encouraging, they being more in numbers and generally better for competition than for years before. The Durham herds of Messrs. Fraser, Lawson, Eaton, etc., and Ayrshire herds of Messrs. Starrat, Blanchard, etc., were good, and they are striving to advance the breeds of cattle in a good direction. As usual, Col. Lawrie's herd of Devons was the only one on the ground; he has a good herd, but public opinion is not "Devon" down here at present. A few Alderneys and Jerseys were on the ground, but the Herefords and Galloways were not represented, these latter classes not being favored in the Maritime Provinces. In one particular as regards the cattle the Board deserves credit, that is, in getting foreign judges, two from Canada and one from P. E. I. This, in a Province so small, where everybody knows everybody and everybody's business, is almost essential, for judges from the home Province will not give entire satisfaction and almost invariably show partiality; therefore having foreign judges, particularly for horses and cattle, is usually preferred.

The show of sheep and pigs was fair; there was, however, considerable room for improvement, although some very good pens of each were exhibited. Other stock on exhibition, not mentioned here, may be described in a similar manner. Quite a creditable display of poultry was made.

In farming implements, as usual, home manufactured articles were few. The enterprising firm of Frost & Wood, of Smith's Falls, had a fine display. In this department a pleasing half hour of the day's wanderings might be spent.

The fruit and vegetable department occupied a good space in the main building, arranged in rotation, a space being allotted to each county, so that their respective good producing qualities could be readily shown.

The carriage display was very good, and the best part of it was a patent seat for a sleigh or cutter, got up by Mr. Murphy, of Halifax. Its

arrangement was so simple, and yet so good, that it proved attractive to everybody, being made to slide under the ordinary seat of a cutter and not be noticed; by simply pulling out a couple of braces, the seat coming at the same time, room can be made for four instead of two.

The most pleasing time to pass through the main building was at night, it being well lighted by gas, with a band of music to enliven the proceedings until 10 o'clock. Our Ontario brethren might take pattern in this particular. The ladies' work, fine arts, etc., appeared to good advantage in the evening. Mr. Ayr, of Sackville, exhibited nice leather goods, imitation morocco, etc.

VIATOR, Nova Scotia.

What are our Agricultural Exhibitions Coming to?

SIR,—The object of our Agricultural Exhibitions, as I take them, is no doubt the improvement of agriculture in all its branches. But unless due attention is directed to the realization of this object, it is likely to be lost sight of in what appears to be the increasing desire to make these exhibitions mere excuses for attracting large assemblages of people for days or weeks together, merely for the purpose of "bringing grist" to the mill of the merchants, tavern and boarding-house-keepers, in the towns and cities where they are held. So far as farmers are concerned, two days are enough for all useful purposes. One day should be devoted to the exhibition of agricultural and horticultural productions, dairy produce, and the interesting hand-work which shows the taste and skill of our farmers' wives and daughters. The second day should be given to the display of live stock, including poultry and agricultural implements and other manufactured articles. American exhibitions are degenerating into what I should call horse-racing, did I not fear to offend the directors who prefer to call them "trials of speed." Throwing off the fox-hounds on a drag (as was done at a leading exhibition) from the exhibition ground, was a novel idea, intended probably to enable the sportsman to show off their white caps and top boots (this may serve as a new "wrinkle for cousin Jonathan's horns") but, alas, the best laid schemes of nice and hunters "gang oft a-glee." The dog must needs put in his inopportune appearance, and paid for his temerity with his life, as it seems they could not be whipped off, until they had cruelly mangled the poor little terrier. It was fortunate that no accident occurred. For what are called the fine arts, such as painting and statuary, these should be reserved for special exhibitions, when the services of competent judges might be obtained. Swings and roundabouts should be strictly relegated to occasions of pleasure, such as pic-nics and social assemblages in the summer season. Many of the features as now managed are mere excuses for gambling. Baseball and lacrosse matches have no necessary connection with agricultural exhibits, and should also be reserved for special occasions. Yet the farmers may justly complain of the temptations to which either they or their sons are exposed by the neglect of the municipal authorities, or directors of the exhibitions, to exclude gamblers and bogus peddlers of every description from the exhibition grounds, which are worse, because more insidious, than the Driving Park meetings, which only serve as means to attract all the rascality in the country within a radius of fifty miles to the place, to the profit of gamblers, black-legs and tavern-keepers. If I remember rightly, no liquor can be legally sold within three hundred yards of any Agricultural Exhibition, and this law should be strictly enforced, as well as preventing any unlicensed grog-sellers who may make their appearance beyond the prescribed distance. As for the Board of Arts and Agriculture, I believe I am only expressing a very general opinion when I observe that the sooner that Board is wiped out of existence, or remodelled, the better for our farmers generally; but here I fear political interest will interpose a very formidable obstacle. I cannot agree with your strictures on the Agricultural College at Guelph. It is but natural that the great stock-breeders should disapprove of the annual sale of stock at the College, as they tend to keep down the high prices which these breeders would undoubtedly charge but for the competition of the College sales. That the farmers themselves approve of it is proved by their numerous attendance on the ground at the recent sale. And as for your remark that the boys receive no better education there than they ought to get at our public schools, I may say that they do not get so good an educa-

tion in our public schools. That the farmers themselves approve of the college may be fairly inferred by the fact that more boys apply for admission than they can accommodate, and as the preparatory examination is very properly very strict, many are rejected, which does not say much for such public schools as they may have previously attended. The Government have had to erect additions to the college buildings this year, which, when completed, will accommodate 80 boys. The last President, Mr. Johnston, whenever any boy had passed his examination, used to examine his trunk, and if he found any of the vile sensational books there with which the country has for many years been flooded, they were confiscated, and their introduction into the College forbidden under a heavy fine, and I have no reason to suppose that his successor, Mr. Mills, who bears a high character as an educationalist, will exercise less care in this respect. They are taught Botany and Entomology, subjects which ought to be, but as a rule are not, taught in our public schools for the plain reason that, so far as I know, not one teacher in a hundred is capable of teaching these subjects; besides they have lectures on veterinary surgery, and they have to take notes of the lectures they hear, which necessitates habits of attention; these are, as a rule, little attended to in our public schools; besides I consider the co-education of the sexes in our public schools, coupled with the unrestrained reading of the pernicious dime novels, has had much to do in producing the prevailing demoralization so frequent amongst the rising generation. Besides, they have been allowed to form themselves into a Battery Company, which necessitates military drill, which ought to be, but is not always, practised in our public schools. I can readily admit that for some years after that College at Guelph came into existence, it was conducted in a very disgraceful manner, but that state of things has now passed away, let us hope never to return. The late President, Mr. Johnston, in his last annual report, recommended that the College should be endowed with six townships on the line of the Canada Pacific Railway, so as to place it on a firm foundation, and lift it out of the region of politics. This project the Government refused to entertain, and, so far, I blame them as much as you can do. True, the farmers did not ask for the College, although they seem pleased with it now. Well, neither did the farmers ask for the Act conferring the franchise on farmers' sons, which was not really necessary, because, any farmer might have his sons' names placed on the voters lists by merely giving him an interest on his farm. But, in fact, many of those who voted for the Act, did so, not because they cared for the farmers, but avowedly because it was a step further in the direction of universal suffrage. But, a few years hence, events will clear the dust out of farmers' eyes, and they find their votes swamped by the votes of the railway and canal labourers, the very classes who are most likely to sell their votes for whiskey; they may have cause to curse the Act and those who passed it. It is to be regretted that some one who can afford the expense cannot be found, possessing different public spirit, to bring the Council of the Board of Arts and Agriculture into Chancery, and oblige them to give an account of their stewardship. SARAWAK.

Ground Bones as a Fertilizer.

"T. E." of London Township, says: After using ground bones on his farm he finds them not nearly so valuable as a fertilizer as he knew them to be in England. For the first year after their being applied to the land the benefit is comparatively very little. Their benefit to the succeeding crop is more marked. He asks how do we account for this difference.

[The difference is attributable to the difference of the climate. No fertilizer in an insoluble condition is available as plant food. The climate of England being humid, and having at the same time sufficient warmth, the bone dust is there quickly dissolved and feeds the growing plant, whereas the absence of a similar state of humidity has a tendency to preserve the fertilizer as applied in an insoluble state. The consequence is that for the first year after its application the benefit is comparatively little, and being afterwards dissolved by the fall and spring rains it becomes available as plant food. The best method of rendering ground bone available when applied is to add it to farm yard manure as a compost. The heat and moisture from the fermentation will render it soluble, and the compost will be an excellent fertilizer, both stimulating and nourishing.]

Legislation Needed.

SIR.—As you have invited us to show up abuses, allow me to call attention to an extraordinary anomaly which now exists in our laws: While manufactured goods may be sold with equal freedom in every municipality, farm and garden produce can only be sold within many of our towns and cities upon the payment of certain sums of money.

He who sells the produce of the soil within the bounds of those corporations must pay a specified fine, which varies according to the greed of each particular corporation. This tax upon an ordinary market gardener will usually double the sum total of all his taxes in his own municipality. He pays this for a privilege which all other men already enjoy, and yet those who cultivate the soil in this Canada of ours are supposed to be free! This market fee tax not only discriminates against a class, but against the residents of outside municipalities.

This sweet privilege of taxing men who are now voters is enjoyed only by town and city councils. Will they voluntarily, from a sense of justice, forego the luxury? Yes!—a few days after the Millennium comes. As the majority of the members of our Local Legislature represent rural municipalities, it will be as well to expedite matters by removing this power which is possessed by only a few corporations, comparatively speaking.

Let every municipality and every class of people stand upon the same level. Let no tribute be paid for the privilege of selling the products of the soil. E. MORDEN, Drummondville, Ont.

SIR.—I would like to ask a question or two, and would feel much obliged if you would answer in the next issue of the *Advocate*, not only for my benefit, but for the benefit of others. On two occasions this summer, when driving on the highway, I had to pass other buggies, but the Canada thistles being so very high and thick—I may say almost in the centre of the road—my horse refused to go into them and give sufficient room for the other buggy to pass without some difficulty. Now, sir, if a collision took place and caused damages, must I or the other party be at the loss of such damages? Could we get redress from the Township Council or Pathmaster? Much has been said and written on the subject of Canada thistles, and still there remains gross neglect, especially on the highways.

My next question is—Can the Superintendent of public rural schools grant holidays to the teachers of such schools for the purpose of pleasure? I also think it is high time that those five days granted to teachers for visiting schools should be stopped, and that the teachers had better teach in their own schools, as those days are generally applied to other purposes than those intended. J. W., Bondhead, Ont.

[1—If you were aware that the thistles were so bad on the road, and neglected to notify or prosecute the Pathmaster, you could not recover damages. If you drove on such a road in ignorance of its bad condition, using every necessary precaution, and another man drove into your buggy and did it damage, the Council would have to pay the costs. 2—We believe the Superintendent has the power to grant the holidays. We agree with you in considering that holidays are too easily and too often given, not only at schools, but by numerous city and other corporations. If the proper system were adopted—no work no pay—there would be less cause for your just complaint.]

SIR.—A word from Napanee may not be out of place, though it only tells you how much we value the *Advocate*. We hope you will keep it up to the standard, a true Canadian farmer's paper. This year has been a good one for farmers in this country—good crops and good prices. Our market has been crowded with produce. This week business has been very brisk—the barley trade being especially lively. Over one thousand loads of barley and other grain have come to our market within the week. Wheat brings a better price than barley this year, though barley pays well, and this is a great section of country for the crop. Potatoes have been a great crop this year. Some very large specimens have been shown, weighing 2 lbs. 4 oz., 2 lbs. 8 oz., and 2 lbs. 9 oz. One farmer has raised 70 bags from two bags planted, or about four hundred bushels to the acre, and this no prize crop. AN OLD SUBSCRIBER.

Farming for Pleasure and Profit.

SIR.—I have chosen this heading for a series of articles detailing some of my farm studies, thoughts, successes, and failures, because of its appropriateness.

IMPROVING THE FARM.

I have no doubt that more money can be made in a few years by taking a good farm and selling off the crops, without giving it much cultivation, or using much manure; that is, to keep but little stock and sell most of the hay, without buying much grain or fertilizer—in other words, skinning the farm; but I have no taste for such farming. I can take no pleasure in seeing the farm grow poorer every year, under my hands, but prefer to improve it from year to year, even if but little. I have seen the farm upon which I was reared grow poorer and poorer for a number of years, under this system of keeping a light stock, planting but little, and only half tilling that little, until the soil was not only impoverished, but filled with weed seed and twitchgrass roots; but now, for a number of years, I have been trying to get it back to its original fertile condition. I find it is hard and slow for a young man to hire such a farm, and, without much capital of his own, to work it up, but it can be done, and there is pleasure in such work, especially if, as in my own case, it is soil one has learned to love by labor done in his boyhood. And who will say that farming does not pay when such a farm is made to support two families, and increase the productiveness year by year, through such times as we have recently been passing?

Improvements should begin nearest home. I have made the same mistake that others often do; that is, in working and improving lands some distance from the buildings before those nearer home were put in their best condition. The nearer the land is to the buildings, the more it is worth, other things being equal, for nearness saves much labor in carting manure and crops, as well as in travel to and from work. The more compact the work of the season is, the better it can be overseen and managed, especially if much help is employed.

UNDERDRAINING.

I know of no farm operation from which I have derived more pleasure than from what little underdraining I have done. It pays well too, although, like most permanent improvements, it takes several years to get all of one's money back. I have done but little draining, and that at odd jobs, as I had time to spare without hiring extra help. The first was three years ago last fall and the following spring, when I put in fourteen rods in an orchard near the house, and there I did my first ploughing last spring, and have raised early potatoes this season. A part of this orchard was a slight basin, in which water stood until late in spring, and after every great rain in summer. It had not been ploughed for some twenty years, and the grass was nearly run out by moss, which covered the ground, but a drain three feet deep, and filled with stones, has changed it into dry, productive land, from which I have taken good crops of cucumbers, oats, clover and potatoes, and have sown it to turnips after digging the early potatoes this fall.

A year ago last spring I put in twenty-one rods of stone drain, 3½ feet deep, thereby converting a very wet, heavy spot of about one-third of an acre, which was nearly surrounded by dry land in a large mowing lot, into a mellow, productive soil, which is now neither too wet nor too dry. Before draining, this spot was very wet, and would only grow grass of poor quality, being full of ferns and buttercup, and when ploughed was very lumpy, the principal crop being Roman wormwood. The surface soil was a dark vegetable mould ten or twelve inches deep, underneath which was a very hard subsoil, eighteen or twenty inches deep, so hard that a pick would make but little impression upon it, and under that a stratum of gravel, full of water, which worked out of the hill near by, and in spots this water came up through the hard pan of the surface, where it escaped only by evaporation. By digging through the hard pan to the gravel, I have drawn the water off below the surface, which is becoming very mellow and productive under cultivation, and produced, last year and this, better crops than the naturally dry soil surrounding it, and especially this season has it shown indications of great fertility. It is a pleasure to work on such land, after one has reclaimed it. I really enjoy going to the out-let occasionally to see the drain discharge, while the surface is so dry and mellow, and to think what it was before. I put in another drain last fall,

and am digging for more now. I believe that a great deal more underdraining might be done to advantage, if done a little at a time, when other work is not pressing, and then what a nice opportunity it gives to put those unsightly stone-heaps and useless walls where they will be out of sight and out of the way, besides making themselves useful. Try it, brother farmers, and see if it does not pay both in profit and in pleasure.—[J. W. P. N. E. F.]

Warts on Horses.

SIR.—I have a valuable horse that is troubled with bleeding warts. Would you be kind enough to tell me some remedy that would not be so severe as to lay him up from his work?

J. W., Collingwood, Ont.

[There has been many remedies prescribed, but the simplest we have met with is by a correspondent of the *Farm Journal* (England); it is at least worthy of a trial. "Inquiries are made for a cure for warts of different kinds on horses, mules, and cattle. Many remedies are prescribed—many barbarous and cruel to the animal. I will give you a remedy often tried and never known to fail. Anoint the wart three times with clean fresh hog's lard, about two days between times. I have had warts on my horses—bleeding warts of large size, rattling warts, and seed warts, to the number of more than one hundred on one horse's head. I have never been able to find the warts for the third application of the lard. All disappear after the second application. I have sent this prescription to several agricultural papers, hoping it would be of some use to farmers. But they all seem slow to believe, perhaps because the remedy is at hand and costs nothing. I own I was slow to believe myself; but, having a fine young mare with large bleeding warts, that covered parts of the bridle and girths with blood whenever used, I thought there would be no harm in trying lard on them. When the mare was got up for the third application there were no warts, and the scars are there now, after more than fifteen years, with very little change. I may say that for cuts, bruises, galls, &c., the application of fresh lard—either for man or beast—is worth more than any patent liniments in use. It will relieve pain instantly, and does not irritate raw flesh, as all liniments do."—[*Farm Journal Eng.*]

Spring Wheat.

SIR.—Spring wheat in this locality has been a miserable failure. I sowed between nine and ten acres of the red chaff wheat, and after threshing I only had 35½ bushels. The wheat looked first-rate until the middle of June, then it began to fail in appearance, as if a blight or rust had taken it. My land is clay loam. A neighbor of mine, Mr. Thomas Shipley, of Falkirk, sowed salt on his land, and he threshed 17 bushels per acre. Can you inform me if there is any better wheat than the red chaff? THOS. GIBSON, Duncreeff.

[There is no other new variety of spring wheat that has been sufficiently tried that we can commend to you from present information of any more service to the country than the red fern, lost nation or white Russian. We are rather pleased to hear that the red chaff wheat has ceased to yield better than other varieties. The quality of flour made from that variety of wheat has done more to injure the reputation of Canadian flour than any other spring wheat now in cultivation. It would be of advantage to Canada if a fine was imposed on any one offering it for sale. The red chaff yielded well in several localities a few years ago, which caused it to be widely spread throughout Canada. Buyers purchased it and put it in the same bins with other wheat. It was sold to millers and for export under the name of Canadian club, but on trial by the bakers it was found to be of a very weak nature, and reduced the market value of our spring wheat many cents per bushel. Would it not be well to check its production?]

SIR.—Can you inform me how burdocks and wild parsnips can be exterminated from a garden? A. K., Sussex, New Brunswick.

[Keep a garden clean, as it should be kept, and burdocks or wild parsnips will not be seen. If hogs are allowed to run where burdocks grow they will eradicate them in two years. The wild parsnips and burdocks will both be eradicated if you do not allow them to breathe through the leaves for two years. This is easily done by planting a hoed crop and keeping it properly cleaned two seasons.]

The Government Sale at the Model Farm, Guelph.

SIR,—As you seem desirous that both sides should be heard on questions relating to the interests of farmers, would you kindly insert the following in the *ADVOCATE* for November:—

In the *ADVOCATE* for October, under the above heading, I noticed with considerable surprise your observations relative to that institution. Now, sir, in this communication I shall only dwell upon one, viz.—*The sooner this Model Farm is abandoned the better it will be for the farmers of Ontario.* A proposition from which I entirely dissent; believing as I do that the farmers of this Province, on account of the importance and magnitude of the interests they represent, are entitled to higher educational institutions, peculiar to their calling,—educational institutions that should stand in the same relation to the agricultural class as the universities and colleges do to professional men, and Normal Schools to teachers.

From observations extending over a period of seventeen years, during all of which time I have been engaged in practical farming and nothing else, I have learned that farmers as a class do not exercise or possess that influence in the councils of the nation and the management of public affairs generally to which they are justly entitled from their numerical strength and the importance of their calling. The principal reason is not that they have less brains, but an inferior education. Their minds have not been trained in youth so as to enable them to hold their own when brought into contact with gentlemen of the learned professions. Why, sir, in the present Provincial Cabinet can you point out a single representative farmer. I am credibly informed (I hope I may be mistaken) that they are all lawyers but one, and he is not a farmer—no, not even the Commissioner of Agriculture is a farmer. What a reflection upon the intelligence of the great agricultural community of this fair Province of Ontario!

You and others may say—Let the farmers use the high schools and colleges to give their sons a better education if that is what is needed, for they are open to all. True; but allow me to point out one or two of the many serious objections: In the first place they cannot secure at the university or colleges knowledge peculiar to their occupation, and which would be of service to them in the management of their farms. Secondly—it makes a farmer hesitate who is desirous that his sons should follow in his footsteps, and who wishes to give them as good an education as the country can afford, when he finds from the experience of others that nine-tenths of the farmers' sons thus educated are weaned from their calling during the process, lose all relish for farming, and ultimately turn their attention to other avocations by which they can earn their living without soiling their hands.

In order to avoid this deplorable result, in my humble opinion, it is necessary in the interests of farmers, and I may say of the community at large, that there should be higher educational institutions for farmers' sons and other people's sons who wish to become farmers, where physical labor and mental study are judiciously blended, where their relish for the honorable pursuit of agriculture is not destroyed, but rather increased and intelligently developed. Of such a character (with all due respect for your opinion to the contrary) I believe the Ontario School of Agriculture to be, where the students are required to labor with hands half of each working day, either at the workshop, among the stock, in the garden, or on the farm; thereby stimulating their physical development, which is of much consequence to farmers as well as to most of other people; and securing information from competent instructors which they would never get at home, and which will be worth much to them when they come to try the realities of a farmer's life.

I will candidly admit that the Ontario School of Agriculture is not a perfect institution, and that there can be many improvements made. The course is not long enough to give students a thorough education, and now that there are so many applicants who cannot be admitted, the standard for entrance should be elevated, so as to do no work in the school room that could be attended to at the common schools. We must remember that it is comparatively a new institution, and give it time to develop its usefulness, which you apparently think is gone already. You would evidently decapitate such institutions without further ceremony. The college has, in my opinion, under the able management of the late Principal, Mr. Johnston, made great strides

towards efficiency and popularity, which is readily perceived by a discerning public. No better evidence of this can be supplied than the fact that to fill 40 vacancies at the beginning of last term there were over 160 applications, mostly from farmers' sons.

"Knowledge is power," says Lord Bacon. Give the farmers' sons knowledge without destroying their taste for their occupation, and a good work will be accomplished; even suppose the cost be considerable for apparatuses, such as land, the different breeds of cattle, sheep, swine, &c.; these are indispensable to impart the necessary practical information at a school of such a character.

With regard to your remarks as to the sale of surplus stock at the farm seriously interfering with the business of old established breeders, I consider them "too ridiculous altogether," when the annual output, according to the summing up in your own columns, does not amount to more than \$2,344.55, all told—not more than is often realized by many ordinary farmers, let alone professional breeders.

Now, Mr. Editor, my humble and candid opinion is that you would be better serving the interests of the great agricultural community of this Province by endeavoring to elevate the character and reputation of the Ontario School of Agriculture, instead of endeavoring to prejudice it in the eyes of the farmers, with a view to its entire abolition. I trust that you will see the error of your ways, and assist in lifting the Ontario School of Agriculture above the arena of party politics, where all educational institutions should rest.

J. P. P. Hespeler, Ont.

[Wishing that both sides be heard, we publish "J. P. P.'s" communication, which, we trust, will "open the ball." We hope some of our other readers will reply in time for the next issue.]

Prize Essays.

To Farmers' Clubs, Grangers, officers or students of the Ontario School of Agriculture, or private individuals, we will offer a prize of \$5.00 each month for the most useful and practical articles on different subjects pertaining to the agricultural interests and prosperity of our farmers. The first is offered for the best reply to the following letter. The article must not exceed one and a half columns of *THE ADVOCATE*, and must be in this office by the 25th of November. The other subjects for which the awards will be given will be announced in subsequent issues of *THE ADVOCATE*.

SIR,—It is with great pleasure I now write to you to ask through your paper for advice on a few things in farming. The first subject will be the use of lime, when and how to put it on. I will give my opinion of it, and should like to hear the opinions of others. I was thinking of putting it on the land just before I sowed my wheat, and cultivating all in together. In fixing the lime for sowing, as it will be unslaked, I suppose I shall have to slake it before sowing? How much lime should I put on my land per acre? Some parts of the farm are clay, but the most of it is clay loam. I think ten bushels per acre would be plenty. Will salt and ashes do to mix with the lime before sowing? Should it be sowed after the grain is up? Should salt be sowed on barley land when you sow the barley or when the barley is up? I have a field for barley next spring, but I intend to seed it down; will the salt hurt the young clover? I should like to know if it will pay to seed down every field each year? I intend to do so with all except the land plowed up from sod. I shall plow up in the fall the land I seed in the spring—will it pay to do so? You will find my questions somewhat mixed in my letter, but you must excuse it this time, as it is the first letter I have written on any subject like this.

H. M., Newcastle, Ont.

SIR,—I have a 3-year-old heifer that is very hard to milk. Can anything be done to make her easier milked? I have heard of putting plugs in the teats. Is it a good plan, and what size ought they to be?

T. J. T.

[A good milker will moderate the complaint. Probing the teats with a knitting-needle will also tend to cause the flow of milk. The insertion of tubes or anything in the teats tend to a permanent injury.]

Lightning Rods Again.

SIR,—We had some swindlers down here from Hamilton, Ontario—agents of a company that manufactures lightning rods. They sold orders and promised insurance policies to insure buildings for ten years against lightning. The policy never came. If you know the name of the company, please let me know, and oblige.

E. READ, Barronsfield, Nova Scotia.

[We do not know of such a company. If any of our Hamilton subscribers know this company they might inform Mr. Read by post card. There are many patent right men and many agents, or pretended agents, travelling the country, who are dead beats. They live on fraud and deceit, and swindle the farmers out of vast sums. Could not some of our M. P.'s bring in a bill to abate this nuisance?]

SIR,—I would like to hear through the *ADVOCATE* from disinterested parties, or persons not raising Italian queens for sale, whether the Italian bee is superior to the black? I have had both, but have only the black bee at present.

F. C. B., Sussex.

SCARCITY OF CARS.—An important feature connected with the successful handling of grain is the facility with which shipments can be made, but, on account of the immense amount purchased at the present time, buyers are cramped, owing to the great scarcity of cars that exists at present. The production of grain in the Western States is enormous, and the multiplication of railway facilities has enabled it to be poured into the centres in such quantities as to tax their storage capacity to the utmost, and all the lines to the seaboard are offered more through freight than they can carry. In the storehouses a very large quantity of grain has accumulated, notwithstanding the fact that more has been shipped this fall than in the same period of any preceding year. The railway companies seem to be doing their best under the circumstances, but even this is very unsatisfactory to those holding grain, and wishing to realize on it.

Fresh Air Without Drafts.

A secret in plant-case management is the prevention of drafts of cold air inward through the foliage. It is easy to see how fatal this must be in any plant-house, no matter how completely provided. But it is not so very obvious at first, though, how such dangerous drafts are to be prevented. Here are the results of some second and third thoughts, and of a good deal of experience: Drafts are caused by the demand made by the stove to keep the fire going and to carry off the smoke. As the rarified air pours out at the top of the flue and so reduces the pressure there, the weight of the cool air presses with preponderating power to take its place. It enters at every crevice. To avoid drafts, then, we must either have no crevices, or we must have a special opening by which air can freely reach the fire without rushing and cutting through such crannies.

When a room, or a mere case for plants, is attached to a kitchen or sitting-room, as a projection in the nature of a glazed porch or bay-window, it is well to use both precautions, that of using putty or paint or paper-lining to stop all possible fissures, and to admit air to the room by a special tube which should bring air from without the building under the floor and rise in or against a warm partition, so as to discharge its cold air against the ceiling, to be warmed before it reaches any of the occupants of the room. This is a perfect and complete mode of ventilation; although so simple. It nearly equalizes temperature throughout the room and the attached plant case; while the plants and the stove, between them, consume or carry off the carbonic acid. It is not necessary that such a plant-case should have a door, but it is a convenience when sweeping to be able to prevent dust from settling upon the plants, and sometimes to inclose them in a more humid atmosphere than is agreeable in a sitting-room. A kitchen atmosphere is better for plants than that of a sitting-room, but as sitting-rooms are usually much too dry, the presence of plants is beneficial to them, both by consuming carbon and giving off oxygen, and by supplying the air with vapor.—[Tribune.

A very good position for beds of tulips, or hyacinths, even, is around the trunk of some large old tree.



The Family Circle.

"Home, Sweet Home."

THE DAY YOU'LL DO WITHOUT ME.

IN TWO CHAPTERS.

(Concluded from October No.)

At last the day came for them to say good-bye, and the boy went out into the world, when a thousand fresh interests sprang up like flowers in his path, making it beautiful. And May went about the old vicarage house and grounds as of old, and found the days very long and eventless now that there was no Lionel to brighten them.

Lady Hastings wrote a courteous letter to Mr. Baron, thanking him for the care and attention he had bestowed upon her son. And Lionel himself wrote a nice note to May during the first term—a note which May prized next to her twisted gold ring; though there was little in it save an account of his feats on the river, and of the prowess of a certain well-pedigreed bull-dog pup. She answered it with all the frank confidence of a child—all the hearty, loving sympathy of a woman. And then it ended.

Gradually the old vicarage house and all the occupants of it faded from his mind. Life was full of bright promise for him, and he had no time to look back. He finished his college career with more than credit. He was a touch more than clever, and his impetuosity stood him instead of perseverance, and carried him well on the road he had chosen. By the time he was five-and-twenty he had done such good service to Government by the subtlety, skill, and energy with which he had carried through a delicate negotiation abroad, that Government recognized his claims munificently, and gave him an important and highly-salaried home appointment. In fact, Lionel Hastings had made his mark, and the mothers of daughters regarded him kindly.

The years had flown with him, the eight years that had passed since he had said good-bye to May Baron, and promised never to forget her. But they had not flown with her.

CHAPTER II.

The first three years that passed after their parting had gone by peacefully enough, though they were burdened by dullness and poverty. Still they were spent in her old home, among her loved ones. But the last five had seen her knocked about from one family of strangers to another; now as companion, now as governess; for her father and mother were dead, and all May inherited from them was a patient, brave heart. There had been no lack of lovers during these long years—lovers who were ready not only to woo, but to "marry and a," if she could only have awakened from that early dream, and left off wearing that little twisted gold ring. But she could not bring herself to do either. She clung as tenaciously to her old memories as she did to that frail little pledge of the affection Lionel Hastings had forgotten. So she preferred working her way on wearily enough, to forfeiting her claims to cherish hope and her ring.

"She was far too beautiful to be a governess," all the men said; for time had matured and enriched the beauty that had been very bright and bewitching at sixteen. Poor May! She longed sometimes to show Lionel the beauty that others prized so highly. Surely if he could see her he would remember Balton and their old "young love."

Her present occupation was a congenial one to her in many ways. She was acting as secretary and amanuensis to a lady, who insisted on being "literary," and who, luckily for May, was really fond of reading good works. This lady was sufficiently bright and clever to be able to collect about her a brighter and cleverer circle; and the ability to do this proves no inconsiderable talent. It was while mingling with this circle that May heard the name of her old love again for the first time in eight years.

"Lionel will be here in an hour, my dear Mrs. Gaspard," May heard one evening, and looking round, she saw a stately matron with Lionel Hastings's eyes. "His mother!" she thought with a thrill, as she obeyed an irresistible impulse, and got herself nearer to Lady Hastings, longing to speak to her, to touch her, to do her some service, however slight, for love of the unforgotten Lionel! Suddenly, the fact that he would be before her in an hour recurred to her; and the thought of how he would look and feel and act upset her self-possession, and made her falter in the advances she had been about to make to Lady Hastings. But that lady being very keen about beauty, had already marked her.

"Who is this girl with the crown of gold?" she asked of the hostess; and Mrs. Gaspard, who was proud of her well-selected library and handsome companion, answered: "My secretary, Miss Baron. Quite a jewel. I wouldn't have her in the house for the world, if I had a son."

Lady Hastings laughed easily. "Those fears are quite out of date; men are so much wiser than they were. What does she do?"

"Everything."

"And how does she do it?"

"Magnificently. I hope no one will discover her value and rob me of her. She saves me all trouble, and sings like a prima donna, for thirty pounds a year."

"Pray, make her sing presently," Lady Hastings said. And at the same moment Lionel entered the room.

May felt as if the words "Lionel, don't you know me?" must be painted on her face, as after speaking to Mrs. Gaspard and his mother, he turned, and carelessly scanned the form and features of the girl who wore his twisted gold ring upon her finger.

"A golden beauty?" was his thought as he let his gaze travel

away from her. "Never seen her before; quite new, evidently."

It was a relief to her that at this moment Mrs. Gaspard came to her and issued her polite command in the words: "My dear, will you sing?"

The acute agony she experienced at his non-recognition could not have been borne in silence. She must either have cried out or laughed. Heaven help the women who laugh in their anguish; they suffer more than those who weep. She must do something, she felt, and so it would be as well to sing, and as she got herself to the piano and took off her gloves, she stole another look at him, and he was looking at her admiringly. His lips had left a kiss on hers which had never been brushed off. And he had forgotten her! Oh, the pain and shame of it! She plunged into something, and sang it well, though every fibre trembled. When she had finished it, he was standing by her, ready to offer her a compliment. Again she turned her great, pleading violet eyes upon him but he did not know her. The little ring shone in the lamp-light, for May never killed it by wearing another. Doubtless he admired her fingers, but he never noticed the ring.

He spoke to her of her masters, of those who had trained her voice, discussing them and it intelligently. Her voice "reminded him of a queen of song whom he had heard in Vienna," he said; and he added that he never forgot a voice. Would she sing again! He would like to remember hers.

How dear he was to her in spite of all his cruel unconsciousness! How desperately dear! How she hated Lady Hastings at that moment, for coming up to him, and putting her hand on his arm, and telling him that she must "take him away!" How she envied the mother! How she loved the son!

"I am to hear one more song, and then I am at your service! You will sing again, will you not?" he said; and Lady Hastings backed his request by saying: "It is really asking too much of you; but do."

She could not resist the impulse. Before her—though she strove to be blind to it—rose the scene and the actors in it—the day that was full of all Summer glory, sweetness, warmth and light—the velvet lawn and weeping willow and rose-covered vicarage, and the splendid boy hero, to whom a lovely shy little girl was reading poetry. She could not resist the impulse. Come what would, he should be reminded of that scene too. And so when her pearly notes in all their purity smote his ear, they fell on the words:

"You love me in your tender way!
I answer as you let me;
But oh! there comes another day
The day that you'll forget me!"

And after one eager gasping glance, he exclaimed: "Why, its May—May Baron!" and her song came to an end.

It would be pleasant to have to record that as she was revealed to him, his love for her returned without delay. But mine is a true tale, and therefore I cannot wrest facts to my own pleasure in such a way. As he recognized her, he admired her immensely, and remembered that even in her girlhood she had not been gawky after the manner of other girls. But he entirely forgot that he had ever loved her, or ever acted in such a way as to teach her to love him. There was not the slightest approach to that high misdemeanor in fashionable life—a scene. His self-possession was so easy, so perfect, that May at once recovered her own. True she ceased singing the instant he exclaimed:

"Why, its May—May Baron!" But even his mother could find no fault with the slow, sweet smile and gentle inclination of the head with which the beautiful and clever companion greeted her father's former pupil.

"Let me introduce you to my mother," he said at once; and May found herself made known to his mother, who complimented her "on the possession of a charming voice."

He did not notice the ring. As soon as she recognized that he was absolutely without recollection of what she had supposed them to be to one another, May took care that he should not see it. She slipped on her glove, and when that was done she felt safer. But she need have no fear. He had forgotten the episode of the ring as utterly as he had forgotten the words he had spoken when she read the poem under the willow-tree—the same poem she had sung this night.

Presently he asked after her father, and May had to ice herself in order to avoid breaking down as she replied that he was dead. He admired her very much. It was quite a treat to meet with that genuine radiantly gold hair, in conjunction with such intensely violet eyes. She was altogether "good form" too, and he lastly wondered if she was married. "She had not corrected him when he had introduced her as 'Miss Baron,'" but that might be due solely to the fact of her having lived long enough to have discovered that it is not worth while to correct any one for anything.

She was dressed well, too. Lionel liked women who were well dressed. He recalled a vision of her in the old days climbing up a tree to get apples for him, in a torn dress and a ragged garden-hat.

"Are you living in town?" he asked.

"I am living here with Mrs. Gaspard, and I must go and attend to some of my duties," she said, rising and smiling at him as composedly as if her heart had not been high unto breaking with revived hope and bitter disappointment. She had pictured meeting him a thousand ways, but not one of the pictures had been like this!

He turned to his mother as May crossed the room away from them. "She must have made a sensation when she came out," he remarked.

"My dear Lionel, she is very handsome and nice; but she has never made a sensation or 'come out,' as you seem to think. She is and has been a governess all her life, I suppose. But she is really a beautiful woman."

"Magnificent! I was in hopes she was married, that I might have seen more of her. She used to be a clever girl, I remember."

Then there was a fresh arrival. Lovely Lady St. John, the leader of the wildest, gravest, most daring set in town, entered, and in another minute a "friendly" smile flashed round the circle as Bartie Friel lounged in.

Of all spectacles on the face of the earth, Lady St. John's reckless disregard of appearances was the most obnoxious to Lady St. John's brother. He was fond of her, proud of her, well inclined to believe that there was—as she used to assure him—"no harm in her intimacy with poor Bartie." But he could not endure the looks that were cast upon the affair, and in exact proportion as he loved his sister, he detested Bartie Friel.

So now, with a sterner face than Lady St. John's friends

and aspersers cared to smile into, he proceeded to take leave of his hostess and bow himself out of the room. As he was doing this, he heard the man who was carelessly compressing Ida—the man he most disliked in the world—ask: "Who is that with the jet in her hair? She's the loveliest woman out!" As these words fell on Lionel's ears he remembered that he had not said good-bye to the "loveliest woman out," who was no other than his old friend and playfellow, May Baron.

He made his way back to her; and some little delay being caused by the increasing crowd, by the time he reached her Bartie Friel had gained the introduction and was engaging her in conversation.

A sharp angry spasm of annoyance—he could not define the cause of it—seized Lionel Hastings, and he turned away and left the house without giving another word to May.

Well, it was over! And it was over without her having derogated from her feminine dignity at all. There was a certain amount of satisfaction in this; but the dubious satisfaction was not balanced altogether by the keen anguish she felt at that utter forgetfulness of his. "After this, I can never wear his ring again," she thought, and she tried to take it off. That ring had been given to her as a pledge, and he had forgotten that he had given it!

That night the ring and his one letter were packed up and carefully put aside. She could not make up her mind to destroy them, though something told her that it would be wiser to do so. But "just for a little longer," she pleaded with this instinct of hers. And so "just for a little longer" she kept them.

Mrs. Gaspard prided herself upon "living in a whirl." She went everywhere, and received every one, and so May, her beautiful companion, was very much before the eyes of that portion of the world who constituted Mrs. Gaspard's "set" at this juncture. Further, Mrs. Gaspard had "no prejudices," she was fond of averring, and so Bartie Friel, who was rather a black sheep by this time, received a warm welcome whenever he came to the house. But though a black sheep, he was a marvelously attractive one; and so people talked about him and what he was doing, and what he might be expected to do. His admiration for Miss Baron did not remain a secret very long. Every one heard of it; among others, Lady St. John and Lionel Hastings.

It is greatly to be feared that every one is afflicted with that baleful thing, a too communicative friend. At any rate, Lady St. John was so afflicted, and thus it happened one day, when Lionel was quietly having a cup of afternoon tea with his sister, that they learned from the lips of this friend that Mr. Bartie Friel was positively going to marry that Miss Baron who lived with Mrs. Gaspard!

Lady St. John received the tidings with the utmost sangfroid. "Is he?" she asked indifferently.

And the friend replied in a friendly manner: "Yes. I wonder he has not told you?"

What could Lady St. John do but acquiesce in that wonder fairly?

"Bartie Friel marry that girl!" Lionel exclaimed the moment he was alone with Ida. "She shall know what he is before she is a day older. Why, she's a good girl. The fellow would shock her out of her life or her reason."

"Oh, Lionel, don't be harsh; don't malign him," she muttered.

Lionel scowled.

"Then spare me," she pleaded in a lower voice. "I know how you blame him, but spare me. Let him marry her if he loves her," and then she began to weep bitterly.

He would make no promise, but he went away from her feeling sorely distressed. Was she not his own sister? "Poor girl," he thought bitterly; and then he remembered the other one. At least he would for old friendship's sake—go and hear from May Baron if there were any truth in this vile report. He could not help calling it a "vile report," as he reflected on some portions of Bartie's career, and contrasted them with all he knew of May.

"Why, I was in love with her myself when I was a lad," he thought, and he wondered if May ever thought about that. An hour later he was inquiring for Miss Baron at Mrs. Gaspard's door, and hearing that she would receive him.

She was quite as composed as on the occasion of their meeting that first night—quite as composed, and quite as beautiful. He could not stand by patiently and see her become the prey of such a one as Bartie Friel.

"On the score of old friendship, I am going to presume greatly with you—greatly, Miss Baron," he began.

She opened her eyes in astonishment. "Haven't you forgotten the old friendship yet?" she said. "What a wonderful memory you must have!"

"It prompts me to say something that you may not like to hear."

He paused, and her treacherous heart began to beat. But she was mistress of herself. His ring and letter were nestled in her bosom all the while. And he could speak calmly of "old friendship!" "Men differ from women with a vengeance," she thought. "He who kissed me, to ask if I have forgotten our old friendship?"

"The way you are going to marry a man of whom you know very little," he began softly. And her face and heart grew like a stone. "Tell me, is it true?"

She made no answer; and he thought: "She is resenting my interference; she has forgotten how fond I was of her when I was a boy, and she looks upon this as mere impertinence."

Nerving himself by all he knew about Bartie Friel, and all he thought about Bartie Friel, he resolved: "He shall never have her! The splendid creature! She deserves a better fate than to be a worn-out rone's wife," and he spoke, warning with his words: "You're astonished at my presumption in interfering; I feel sure of that. But May, I cannot forget the old days when we were children together. Can you?"

She bent her head down lower, and he could not see her eyes; but he went on: "You have forgotten probably, May, and why should you have remembered, indeed? But I will remind you, and then you will understand that it was more than merely friendly interest that prompts me to interfere."

Memory jogged him at this moment, and he went on glibly: "You may have forgotten how I loved you, darling—"

"Have not you been the one to forget?"

"On my faith, no! Not now, when I see you again," he protested ardently; and then, as he clasped her in his arms, she showed him the ring and the letter, and sang him a verse from the song that awakened his memories:

I do not fear the darkest way,
With those dear arms about me;
But oh! I dread another day—
The day you'll do without me!

THE END.

The Album.

My photograph album? Certainly,
You can look, if you wish, my dear;
To me it is just like a graveyard,
Though I go through it once a year.
Any new face? No, indeed. No.
I stopped collecting some years ago.

Dearest Jeanette, look well at the book;
It is full of histories strange;
The faces are just an index, dear,
To stories of pitiful change—
Drama and poem and tragedy,
Which I alone have the power to see.

Ah! I thought you would pause at that face:
She was fair as the poet's lay,
The sweetest rose of her English home;
Yet she perished far, far away,
In the black massacre at Cawnpore
She suffered and died—we know no more.

And that? Ah, yes, 'tis a noble head!
Soul sits on the clear, lofty brow;
She was my friend in the days gone by,
And she is my enemy now.
Mistake, and wrong, and sorrow—alas!
One of life's tragedies—let it pass.

This face? He was my lover, Jeanette;
And perchance he remembers to-day
The passionate wrong that wrecked us both
When he sailed in his anger away,
Heart-sick and hopeless through weary years,
At length I forgot him—despite these tears.

That handsome fellow? He loved me too;
And he vowed he would die, my dear,
When I told him "No," 'tis long ago;
He married the very next year.
That one I liked a little, but he
Cared much for my gold, nothing for me.

Brides and bridegrooms together, dear,
And most of them parted to-day;
Some famous men are quite forgot,
Some beauties faded and gray;
Close the book, for 'tis just as I said—
Full of pale ghosts from a life that's dead.

Hindoo Women.

THEIR BEAUTY IN YOUTH—THEIR CLEANLINESS AND SIMPLICITY.

The Hindoo women, when young, are delicate and beautiful, so far as we can reconcile beauty with olive complexion. They are finely proportioned; their limbs small, their features soft and regular, and their eyes black and languishing; but the bloom of beauty soon decays, and age makes rapid progress before they have seen thirty years. This may be accounted for from the heat of the climate and the customs of the country, as they are often mothers at twelve years of age.

No women can be more attentive to cleanliness than the Hindoos; they take every method to render their persons delicate, soft and attractive; their dress is peculiarly becoming, consisting of a long piece of silk, or cotton, tied round the waist, and hanging in a graceful manner to the feet; it is afterward brought over the body in negligent folds; under this they cover the bosom with a short waistcoat of satin, but wear no linen. Their long black hair is adorned with jewels and wreaths of flowers; their ears are bored in many places, and loaded with pearls; a variety of gold chains, strings of pearls and precious stones fall from the neck over the bosom; and the arms are covered with bracelets from the wrist to the elbow. They have also gold and silver chains round the ankles and abundance of rings on their fingers—frequently a small mirror. I think the richer the dress the less becoming it appears, and a Hindoo woman of note always seems to be overloaded with finery, while the village nymphs, with fewer ornaments, but in the same elegant drapery, are most captivating—although there are but few women, even of the lowest families, who have not some jewels at their marriage.

"LIVE AND LET LIVE."—Village Doctor (to the grave-digger, who is given to whiskey): "Ah, John! I'm sorry to see you in this pitiable condition again!" Grave-Digger: "Toots, Sir! Can ye no' let a' little fau' t' o' mine gae by? It's mony a muckle ane o' yours I ha'e happit owre, an' said naething aboo' it!"—Punch.

The Uses of an Enemy.

Always keep an enemy in hand—a brisk, hearty, active enemy. Remark the uses of an enemy:—

1. The having of one is proof that you are somebody. Wishy-washy, empty, worthless people never have enemies. Men who never move never run against anything; and when a man is thoroughly dead and utterly buried, nothing ever runs against him. To be run against is proof of existence and position; to run against something is proof of motion.

2. An enemy is, to say the least, not partial to you. He will not flatter. He will not exaggerate your virtues. It is very probable that he will magnify your faults. The benefit of that is two-fold; it permits you to know that you have your faults, and are therefore not a monster, and it makes them of such a size as to be visible and manageable. Of course, if you have a fault you desire to know it; when you become aware that you have a fault you desire to correct it. Your enemy does for you valuable work which your friend cannot perform.

3. In addition, your enemy keeps you wide-awake. He does not let you sleep at your post. There are two that always keep watch—namely, the lover and the hater. Your lover watches that you may sleep. He keeps off noises, excludes lights, adjusts surroundings, that nothing may disturb you. Your hater watches that you may not sleep. He stirs you when you are napping. He keeps faculties on the alert. Even when he does nothing he will have you in such a state of mind that you cannot tell what he will do next, and the mental *qui vive* must be worth something.

4. He is a detective among your friends. You need to know who your friends are, and who are your enemies. The last of these three will discriminate the other two. When your enemy goes to one who is neither friend nor enemy, and assails you, the indifferent one will have nothing to say or chime in, not because he is your enemy, but because it is much easier to assent than oppose, and especially than to refute. But your friend will take up cudgels for you on the instant. He will deny everything and insist on proof, and proving is very hard work. There is scarcely a truthful man in the world that could afford to undertake to prove one-tenth of all his truthful assertions. Your friend will carry your enemy to the proof, and if the indifferent person, through carelessness, repeats the assertions of your enemy, he is soon made to feel the inconvenience thereof by the zeal your friend manifests. Follow your enemy around and you will find your friends, for he will have developed them so that they cannot be mistaken.

The next best thing to have to a hundred real friends is to have one open enemy. But let us pray to be delivered from secret foes.—[Sunday Magazine.

One's Friends.

Money can buy many things, good and evil. All the wealth of the world could not buy you a friend, nor pay you for the loss of one. "I have wanted only one thing to make me happy," Hazlitt writes, "but, wanting that, have wanted everything." And, again, "My heart, shut up in the prison-house of this rude clay, has never found, nor will it ever find, a heart to speak to."

We are the weakest of spendthrifts if we let one friend drop off through inattention, or let one push away another, or if we hold aloof from one for petty jealousy or heedless slight or roughness. Would you throw away a diamond because it pricked you? A friend is not to be weighed against the jewels of all the earth. If there is coolness or unkindness between us, let us come face to face, and have it out. Quick, before love grows cold. "Life is too short to quarrel in," or to carry black thoughts of friends. If I was wrong, I am sorry; if you, then I am sorrier yet, for should I not grieve for my friend's misfortune? And the mending of your fault does not lie with me. But the forgiving it does, and that is the happier office. Give me your hand and call it even. There! it is gone; and I thank a kind heaven I keep my friend still! A friend is too precious a thing to be lightly held, but it must be a little heart that cannot find room for more than one or two. The kindness I feel for you warms me toward all the rest, makes me long to do something to make you all happy. It is easy to lose a friend, but a new one will not come for calling, nor make up for the old one when he comes.

Proper Exercises.

When we talk about exercise, we are very apt to forget that it is a many-sided word. We use it as if it referred merely to the movement of the muscles. It is necessary to health that all our powers should be exercised, and the continued disuse of any one of them results in its partial or total loss. If anyone should lie in bed for years, without the slightest ailment, one would lose the use of the limbs; and this is equally true of quite different faculties. All our powers grow by use. If we neglect to cultivate the habit of observation, we might as well go through the world blindfold.

We lose our faculty—what artists call our "touch"—by neglect of practice on other things beside the piano. The man who seldom reads, reads slowly; the woman whose writing is confined to an infrequent letter to some absent child, spends more time over that than does a practised writer over a dozen pages of manuscript. In the realm of the emotions it is the same. Benevolence is largely a matter of habit. So is affection, self-control, gentleness. If, then, exercise in its largest sense is of so great consequence, we at once see the importance of apportioning it to our own personal needs.

If our occupation is sedentary, we need to plan for walks and rides, and active games, to keep our muscles lithe and serviceable. But if our employment gives us enough muscular action, it is not one whit less important to our health of body that we should plan for mental exercise—for employment enough of memory and our reasoning powers to keep them from rusting. And, in either case, that life must be a dwarfed and unhealthy one that does not provide for our spiritual faculties—for worship, and charity, and patience, and magnanimity. Exercise of soul, mind and body, can alone bring us to the stature of the perfect man.

Good Talkers.

The first requisite of a good talker is genuine social sympathy. A man may not say, out of some selfish motive, or some motive of personal policy, "Go to! I will become a good talker." He must enjoy society and have a genuine desire to serve and please. We have all seen the talker who talks for his own purposes, or talks to please himself. He is the well-known character—the talking bore. The talker who gets himself up for show, who plans his conversations for an evening, and crams for them, becomes intolerable. He lectures; he does not converse. There is no power of a talker so delightful as that of exciting others to talk and listening to what his own inspiring and suggestive utterances have called forth. Genuine social sympathy and a hearty desire to please others are necessary to produce such a talker as this, and no other is tolerable. Social sympathy is a natural gift, and there is a combination of other gifts which constitute what may be called *esprit*, that are very essential to a good talker. This combination includes individuality, tact and wit—the talents, aptitudes and peculiar characteristic charm which enable a man to use the materials of conversation in an engaging way, entirely his own. Every good talker has his own way of saying good things, as well as of managing conversation based on his *esprit*.—[Dr. Holland in Scribner's for October.

The Uses of the Potato.

In France the farina is largely used for culinary purposes. The famed gravies, sauces, and soups of France are largely indebted for their excellence to that source, and the bread and pastry equally so; while a great deal of the so-called cognac, imported into England from France, is the produce of the potato. Throughout Germany the same uses are common. In Poland the manufacture of spirits from the potato is a most extensive trade. "Stettin brandy," well known in commerce, is largely imported into England, and is sent from thence to many of our foreign possessions as the produce of the grape, and is placed on many a table of England as the same; while the fair ladies of our country perfume themselves with the spirit of potato under the designation of *eau de Cologne*. But there are other uses which this esculent is turned to abroad. After extracting the farina, the pulp is manufactured into ornamental articles, such as picture frames, snuff boxes, and several descriptions of toys, and the water that runs from it in the process of manufacture is a most valuable scourer. For perfectly cleansing woollens, and such like articles, it is the housewife's panacea; and if the washerwoman happens to have chillblains, she becomes cured by the operation.

Minnie May's Department.

MY DEAR NIECES,—

What a pleasure and advantage it is to be able to converse freely, and how difficult it is for many that are well educated to express their views for the simple want of practice. Now good conversation should by no means be confined to literary, political or high social circles, but be cultivated in every home, and the prized accomplishment of every class of society.

Now, dear nieces, why not endeavor during our long winter evenings to have conversational parties, to bring young intellects in friendly collision, and enable each other both to give and get a portion of intellectual wealth. They would serve to loosen the tongue, which in so many seems utterly tied when they attempt to speak in company. Conversation well directed might become a great means of exercising their intellectual powers, and the exchange of thought and information benefit one another and acquire a fluency of speech which is so necessary in life. Parents may do much to encourage in their children the faculty of talking by teaching them to think and reason as well as speak. In teaching the art of conversation certain dangers have to be avoided—all formality and everything priggish or conceited, and that frivolity of speech and manner which infests every class of society. The use of slang terms should not be tolerated, but plainness and purity of speech, which always mark the true lady or gentleman.

The kind of conversation that generally goes on, even in polished and cultivated circles, would make a very poor appearance in print. This fashionable repugnance to anything like solid conversation springs from stupidity or sheer affectation, and is one of the worst faults of the reigning frivolity of the day. With rare felicity Cowper describes conversers and conversations which are quite common at the present day. His satire was never more needed than now, and we would like to draw our readers' attention to the perusal, or re-perusal, of his conversation. Denouncing the fierceness of some kinds of wordy war, he exclaims,

"Preserve me from the thing I dread and hate,
A duel in the form of a debate!"

Then passing from the ferocious to the timid and hesitating talker, he tells us,

"Dubious is such a scrupulous good man—
Yes, you may catch him tripping if you can—
He would not with a peremptory tone
Assert the nose upon his face his own;
His evidence, if he were called by law
To swear to some enormity he saw,
For want of prominence and just relief,
Would hang an honest man instead of a thief."

Then your positive people are thus characterised—

"Without the means of knowing right or wrong,
They are always decisive, clear and strong,
Where others toil with philosophic force
Their nimble nonsense takes a shorter course,
Flings at your head conviction in a lump,
And gains remote convictions in a jump."

The poet thus touches up some well meaning but afflicting personages—

"But sedentary weavers of long tales
Gives me the fidgets, and my patience fails.
'Tis the most asinine employ on earth
To hear them tell of parentage and birth,
And echo conversations dull and dry,
Embellished with, "H. said," and so said I."

And then he gives some excellent directions to story-tellers—

"A tale should be judicious, clear, succinct,
The language plain, the incident well liked;
Tell not as new what everybody knows,
And, new or old, still hasten to a close."

The following picture will remind many of what they have felt and seen:

"The emphatic speaker dearly loves to oppose
In contract inconvenient, nose to nose,
As if the gorman on his neighbor's phiz
Touched with the magnet attracted his.
His whispered theme, dilated and at large,
Proves after all a wind gun's airy charge."

MINNIE MAY.

Answers to Inquirers.

MISS NELLIE.—The letters "I. H. S." signify, "Jesus hominum Salvator"—Jesus the Saviour of men. "In hoc salus"—In Him is salvation.

M. A. J., Kingston.—The best thing to do is to take the shawl to a professional dyer, who will treat it to a mordant that will fix the color. The next best plan is to dye it again, being careful to follow a recipe which will insure a fast color.

RALPH, N.S.—We believe steel, or rather iron, pens were made in Holland as early as the seventeenth century, but it was not until 1824 that they were produced in quantities as regular articles of manufacture.

MRS. CARSON.—Bird fanciers advise for lice or mites rubbing a little Persian insect powder under the bird's wings. Also apply sweet oil to the end of the perches and that part of the cage on which the perches rest; here it is the lice are liable to breed. At night cover the cage with a piece of white cloth—flannel is the best—and remove early in the morning. The insects will leave the bird to go to the cloth, which in consequence should be washed each day previous to using again at night.

J. C. G.—A man of thirty is certainly not too old to marry a girl of nineteen.

EFFIE M.—The mere proffer of a nosegay, and the dancing three or four times with you, should not lead you to rush at the idea that the swain is enamoured. Wait till his attentions become unmistakably pointed, before you give way to such deliberations.

JANE G.—You should certainly accept the apology offered by your young female friend, under the circumstances. She did not know of your engagement to the gentleman all the time she joked with you upon the subject; and, after all, the jest was a trivial one.

ROSE.—It is not good to habituate yourself to take citrate of magnesia every morning. For obstinate pimpular eruptions a person should go through a regular course of medicine, relative to which a proper practitioner should be consulted.

JERSEY.—The words "warm" and "hot" do not express the same meaning, the former expressing only a moderate degree of heat, and the latter a great degree.

RECIPES.

PRESSED VEAL.

Take 8 lbs. of veal; hash the meat; 3 eggs beaten, pepper and salt, and nutmeg to taste; 3 tablespoonfuls of butter melted. Roll 8 crackers; mix half with the meat; the other half to be put on the outside. After making the meat in a form, bake two or three hours, basting with butter. Half fill the pan, in which the loaf is baked, with water when it is placed in the oven.

MOON-SHINE.

Beat the whites of two eggs very light. Sweeten to taste. Then slice in very thin pieces one banana and stir into it; or if you choose take two oranges, or any kind of fruit will do. Do not make it until just before going to table. It is a handsome dish, and delicious for tea.

HOMINY GRIDDLE-CAKES.

To one pint of warm, boiled hominy add a pint of milk or water, and flour enough to make a thin batter; beat up two or three eggs, and stir them into the batter with a little salt. Fry as any other griddle-cakes.

WAFFLES AND CORN-BATTER CAKES.

Two eggs well-beaten, stir in a little flour, then one teacup of buttermilk, in which has been dissolved one teaspoonful of soda, one teacup of sweet milk, then the remainder of one quart of flour. For batter-cakes, stir in meal instead of flour. Use plenty of lard in baking—or gravy, or butter.

BREAKFAST BISCUIT.

Take a piece of risen bread dough and work into it one beaten egg and a tablespoonful of butter, or lard and butter mixed. When these ingredients are thoroughly amalgamated, flour your hands and make into balls the size of an egg. Rub a tin baking pan over with butter, and set them in a quick oven for twenty minutes, when they will be ready for the table. Always break them open, for to cut would make them tough.

POT-AU-FEU.

Into four quarts of cold water put two pounds of "round;" bring very slowly to the boiling point and boil slowly till the meat is about half done, then add salt and a few vegetables at a time, so as not to stop the boiling—three or four carrots, a cabbage cut in quarters and tied together, potatoes, half a dozen onions, a bouquet of herbs—celery, parsley and sweet basil tied together. When the pot-au-feu is nearly done, toast slices of stale bread crisp and brown and put them in the soup tureen. Pour the broth over them when done and serve; arrange the meat on a platter with the vegetables around it. This is the French method of cooking what in America is called a "boiled dinner."

MAKING VINEGAR.

Mix five quarts of warm rain-water with two quarts of New Orleans molasses and two quarts of liquid yeast. In a few weeks you will have strong vinegar.

PICKLED NASTURTIUMS.

Soak them twelve hours in brine, drain, and then pour on them boiling vinegar, with whole black pepper and allspice.

HORSE-RADISH SAUCE.

Grate the horse-radish after it has been well cleaned and the outer skin peeled off, cover it with vinegar, and bottle for immediate use. As a condiment for soups, fresh meats and boiled cabbage, horse-radish sauce is highly regarded by epicures. Some persons prefer to cut the root in long thin strips, and boil it in milk.

CHOPPED PICKLE.

Pare and cut cucumbers into pieces an eighth of an inch thick, and prepare some onions in the same way. Place a layer of each in a jar, sprinkling lightly among them salt, white mustard seed, red pepper and cloves. When the jar is nearly full, boil vinegar enough to cover them, and then fasten the vessel so as to exclude the air as much as possible.

TO MULL CIDER.

If your cider is hard, reduce it with water to a palatable strength, and set it on the fire to boil, with the addition of a few grains of allspice. To each quart of cider take eight eggs and beat them in a large pitcher, with as much sugar as you may deem sufficient. By the time the cider boils the eggs will be light; then pour over them the boiling liquid, and continue to pour it from one pitcher to another until it has a fine froth on it. When you put the cider into glasses, grate nutmeg over the top.

CLOSING CRACKS IN CAST-IRON STOVES.

If finely pulverized clay and a little salt are mixed with an equal quantity of wood-ashes, sifted through a fine sieve, and made into a paste with water, and then filled into the cracks of a stove when the stove is cold, it will effectually stop the cracks. It makes a cement that will not pull off or break, and soon assumes, after being heated, a great degree of hardness. This can also be used with good results in setting the plates of a stove or fitting the pipe, making all the joints perfectly tight. This is a useful hint to country house-keepers, who cannot always get repairs done in short notice.

TO REMOVE WARTS.

The best application is said to be that of monohydrated nitric acid. The ordinary acid should not be used, because its caustic effects extend much farther than the points touched, while the action of the stronger acid here recommended is limited to the parts to which it is actually applied. Nitrate of silver is also frequently used with advantage, and of late a concentrated solution of chloral has been spoken of as efficient in destroying warts.

Grace Greenwood relates as an instance of the extravagance of New England humor, that when a young farmer's wife made her first boy's pants precisely as ample before as behind, the farmer exclaimed: "Goodness, he won't know whether he is going to school or coming home!"

A little fellow, on going for the first time to a church where the pews were very high, was asked on coming out, what he did in the church, when he replied: "I went into a cupboard, and took a seat on a shelf."

The Bear.

The family of bears is large. The one here represented is of the grizzly species, which is the most savage of his race. He is not the first to attack, but if attacked he will pursue the assailant to the last, nor will he quit the conflict while life remains. He has been known to receive 10 balls, and has survived 20 minutes before succumbing to his wounds. The claws of the beast are sufficient to tear even a larger animal into shreds. Bears have a strong attachment for each other, especially the female for her young.

There are bears in almost all latitudes from the equator to the pole—the warmer the climate the more tame and feeble compared with natives of cooler ones. The bears again are seasonable animals, retiring during the winter and going abroad in the spring. But it is not from the storm that the bears retire; it is from the severe cold. The storm is both seed time and harvest to the bear, and during its utmost fury they range the the wilds and forests accompanied by hawks and owls, which like the bears are equally remarkable for their strength and for their impenetrable covering.

The color of the grizzly bear is a mixture of brown, white and black. The tail is short, and in the living animal completely hidden by the hair. On the fore paws the claws are rather slender, but long as well as crooked and sharp at the tips. The soles of the hind feet are in a great part naked and the claws on them considerably smaller than those on the fore paws, though much more crooked. Bears are great climbers, passionately fond of honey, great devourers of roots, green wheat, and in America green maize, and especial enemies to hogs and young calves.

"So are you going to keep a school," said a young lady to her old maiden aunt. "Well, for my part, sooner than do that, I would marry a widower with nine children."—"I should prefer that myself," was the quiet reply; "but where is the widower?"

He had an auburn-haired girl, and promised to take her out riding. She met him at the door when he drove up, and he exclaimed: "Hello, Ready?" She misunderstood him, and they don't speak now.

How Niagara Looks by Electric Light.

The illumination of the Niagara Falls on the American shore by means of the electric light has now given to this far-famed scenery a doubly attractive aspect. Science by this appliance eclipses even the effects produced by art, and the fantastic display of color through suitable glasses surpasses the most gorgeous tints the painter may throw upon his canvas. The Falls from the terrace of Prospect Park appear now on a dark night under the rays of a red electric light like an immense swiftly-moving flood of dark red fiery lava, which as quickly changes by turn of the hand of the man stationed at the revolving glass in front of the burner into one of bright quicksilver, or again when alternating colors are placed before the dazzling electric flame, as a huge compact and moving rainbow. The foam and spray at the pit of the cascade which the daytime visitor never tires to

with the pitch black background, afforded by the dark mazes of the shrubbery and trees of the park.

This is the effect of about only a dozen of these lights. Their weird look could be enhanced beyond calculation if the entire vast scenery of the grand cataract could be lighted up the whole distance from the American to the Canadian shore by means of a few additional batteries placed upon rafts anchored near the foot of the Horse-shoe Falls. Such an illumination would eclipse the magical wonders of all traditional Eastern fairy scenes. They would pale into insignificance before these brilliant hues called into life by the wand of modern science, and if such a display could be viewed on a dark night from a bird's-eye view standpoint, the charmed gazer might readily conceive of their resemblance to those antediluvian gigantic outbreaks of fiery lava floods, the still imposing congealed ruins of which now confront the visitor to

the cliffs of Staffa or the Giant's Causeway.

There is no reason why such novel treats on a small scale could not be imitated with advantage elsewhere, and give with less cost more satisfaction than evanescent and costly fireworks.

INFLUENCE OF HAPPINESS OVER THE MIND.—It should never be forgotten that the happier a child is the cleverer he will be. This is not only because, in a state of happiness, the mind is free, and at liberty for the exercise of its faculties, instead of spending its thoughts and energies in brooding over troubles; but also because the action of the brain is stronger when the frame is in a state of hilarity, the ideas are more clear; impressions of outward objects are more vivid; and the memory will not let them slip. This is reason enough for the mother to take some care that she is the cheerful guide and comforter of her child. If she is anxious or fatigued, she will exercise some control over herself, and speak cheerfully, and



gaze upon, are no longer spray and mist under this nocturnal fairy transformation, but fiery clouds, amid which the rays of the powerful light play with magical effect, somewhat resembling, though more intense, the wondrous phosphorescence of the ocean on a sultry storm-portending night.

The many pleasing small fountains which embellish the grounds of Prospect Park itself throw, for once, in reality as it were, brilliant showers of silvery spray, when exposed to the dazzling glare of any of the near-by electric flames. The most enchanting pyrotechnic displays of the Chinese art are but little shadows in comparison with this spectacle. At will the myriads of tiny drops may be turned either into showers of flashing rubies or sapphires, changing in a twinkling to golden sprays, almost too intense in their splendor, and painful to the eye, through the intense contrast

try to enter freely into the subject of the moment; to meet the child's mind, in short, instead of making him sink for want of companionship.

The Royal or Golden Eagle.

The illustration given in our last issue of the above bird being driven from its prey by a species of the deer tribe, is of an unfrequent occurrence, as it is one of the surest birds to seize its prey. Still all have mishaps sometimes. He appears to have lost a few feathers in this encounter. This bird is found in Europe and some parts of America, and measures about seven feet across the wings. It is a more noble bird than the common eagle that may be sometimes seen in our latitude. The stories of its carrying off children is in our opinion fictitious. Its food consists of rabbits, hares, kids, lambs and small birds.

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES,—It is quite evident, from the limited number of correct answers to last month's cryptograph, that many of you will be anxiously awaiting the promised explanation in regard to deciphering it. Now the letter l must stand for either a or i, and as we see in the second line l written in a small character we know it must be for a. Again, knowing l to be for a, we also know that p in the fourth line must be for i. Now since the letter e occurs in English more frequently than any other letter, let us try in this. Looking over the puzzle we find k occurring quite a number of times oftener than any other letter, therefore we can almost positively infer that k is for e. In the fifth line we see the word lbk, and substituting the letters we already have we get a—e; now the most likely letter to go between a and e is r, making the word are; at any rate let us assume b to be for r. Again, at the end of the fourth line we find the word nkb, that is —er, and the only letter that can fill up the blank is h; thus we find u to be equivalent to h. Again, in the fifth we find muk, or —he, and the only letter that can fill up the blank is t; hence m is t; and mn in the fourth line is for t—, and o being the only letter that will make a word, n stands instead of o. Now in the fifth and last lines the word leg occurs, and knowing the first letter to be a, we are apt to suspect, from the position of leg in the last line, it to be the common word and; thus we assume e and g to be put respectively for n and d. Again, by substituting for p and m in pmo in the last line, we find that o must be for s. From the third word, nerk, or on—e, we find that r must be a substitute for c, and we know that ny or o— in the third line must be either on, of, or, and having other letters for n and r we conclude that y is for f. Again, the last word by substitution is cond—ctor; the word conductor is immediately thought of, and hence t is u. In the second word in the third line we have —eddin—, suggesting immediately wedding, thus giving us the letters w and g for i and c. From the second word in the fourth line we get —entured, indicating ventured, so x is v. From ont'd'o or sou—s in the seventh line, suggesting the word soul's, hence d is l; and in the second word we have lad—, showing us immediately the word lady, hence z is y. Now by substituting the letters found we find out almost every word in the verse; but if there are yet incomplete words they at once suggest themselves on perusal. In this manner, and by noticing particularly the small and the rhyming words, most puzzles of this nature can be deciphered. UNCLE TOM.

PUZZLES.

98—CRYPTOGRAPH.

Djia jkg hmff,
Eukb vy j omff,
Bq nubio j yjml qu ejbus,
Djia nuff gqek,
Jkg csqan omw isqek,
Jkg hmff ij xu boxcfmkh jnbus.

99—CHARADES.

- 1.—My first is used for giving light
To many persons every night.
My second gentlemen hold in their hands,
And my first in my whole doth stand.
- 2.—My first light without doubt,
My second keeps the robbers out;
That my whole is dangerous by everyone is said,
For it has killed many a person dead.
- 3.—My first is a vowel to be seen in sank;
My second a spirit too often drank.

My third a small thoroughfare in a town;
My whole is a battle of great renown.

4.—My first is to know; my second is to utter
with musical sounds; my third is a weight, and
my whole is the name of a town in England.
SCHOOL GIRL.

5.—My first is a kind of pottery; my second is
a dwelling-place; my third is a human being, and
my whole is a storehouse-keeper.

100—SQUARE WORDS.

- 1.—To summon.
 - 2.—A river of Italy.
 - 3.—A part of the day.
 - 4.—A cape of Scotland.
 - 5.—A river of America.
 - 6.—A town in Wales.
- My initials will give a city of Asia, and my
finals a city of Europe.
- 1.—1, a bird; 2, a bird; 3, to turn aside; 4,
tendon; 5, to come in.
 - 2.—Part of the face; an animal; a flower; a lake.

101—ILLUSTRATED REBUS.



GOOD ADVICE.

102—NAMES OF BIRDS.
An article of jewelry and a bird; a fraction and
a small hill; a piece of money; time of darkness;
a proposition and a storm; a musical instrument
and a biped.
E. BLAIR.

103—DECAPITATIONS.
Whole, I am costly; behead me, and I am part
of the head; transpose my whole, and I am to
defy; change my second letter and transpose, and
I am an animal; change my last letter, and I am
a document; change my last letter again, and I
am profound; curtail me, and I am a river.
M. J. SELLS.

The following is the list of successful prize winners, who
sent in correct answers to the illustrated rebus in October
number:—
JOHN WATTERWORTH, M P P, Wardsville, Ont, 1st prize,
\$5 00.
JOHN WEST, St Foy, P Q, 2nd prize, \$1 00.
MATTHEW ALLISON, Inverhuron, Ont, 3rd prize, 25c.

Answers to October Puzzles.

- Honesty is the best policy.
- 90—A lady once whose love was sold,
Asked if a reason cou'd be told
Why wedding rings were made of gold.
I ventured thus to instruct her—
"Love and lightning are the same,
On earth they glance, from heaven they came;
Love is the soul's electric flame,
And gold its best conductor."
- 91—1, Sunflower; 2, Penmanship.
92—Melbourne.
93—1, Polyanthus; 2, Primrose; 3, Love in a mist.
94—Like the dew on the mountain,
Like the foam on the river,
Like the bubble on the fountain,
Thou art gone and forever.
- 95—Cayman.
96—Irish, Iris; Rabbit, Rabbi; Sight, Sigh; France, Franc;
Bee, Bee; Scarf, Scar; Brown, Brow.
97—Education.

Names of Those Who Sent Correct Answers to October Puzzles.

Mrs Jos Hepworth, Richd Pirt, Thos Corbitt, Robt Jacket,
Mrs Geo Husband, Ida A Parlee, Fannie Sharp, Rhoda, R
Suddarz, Jno Leggo, Nathan Yussey, Annie Rogers, Mrs Jno
Koozin, Gilbert McIntyre, Annie Jones, Francis Books,
Mrs George Robinson, A Elliott, R McLeod, C W Parker, Geo
S Chitty, H E F Ostrow, Henry Brown, D J Buchanan,
W H J L Beck, James Durham, Alice Cross, Thos Keenan,
John Vivian, Wm Graham, James E Lucas, Allen Jones,
Saml Herity, Helen Whitney, Wm Legg, Mrs Jacob Wisner,
Mrs W Knowles, Henry Westlake, Geo Walden, F W
Lampier, Mrs Alex Buriss, Thos Pearce, Wm Laing, D A
Ghent, J C Stafford, John Wesley Denzes, Robt V Keating,
Fred Greer, Amos Hawkins, Henry Howell, Albert H Weeks,
Hattie Hariland, John Watterworth, M Thornicroft, Mathias
Bonhle, N Robinson, Trotman, Amass Kennedy, Geo L
Shipley, Barbara Capron, John Scollen, T O Newson, Eliza J
Blair, Anna Maria McPaul, L Anenson, James Stephens, Mary
Legart, Jas Sheppard, J P Phin, Thos Nagle, David Cutten,
Mrs Wm Syer, John Spring, Maggie Devitt, Belta McVicar,
Jas Manning, Jas Anguine, Leonard Powell, Mary L Tyairty.

Andrew Gordon, H A Powers, H D Wetmore, Hector McKin-
hon, Wm Taylor, Wm Cross, John West, Henry Careth, E M
Culver, Maggie Meander, M H S Macnab, C Humbsole, John
Cooney, Thos Sells, John Cooke, M Tupper, David Wismer,
H D Wetmore, John West, J P Phin, Hector McKinnon, Saml
Anguine, S T Hagerman, E Tupper, Wm Watter, Ella Mylie,
George Norton, H Christie, Jas R Upham, W A Locke Jones,
Thos A Corbett, Chas Beas.

Credit is due Hattie Haviland for having answered the
greatest number of puzzles correctly.

HUMOROUS.

A German clergyman who was travelling stopped
at a hotel much frequented by wags and jokers.
The host, not being used to have a clergyman at
the table, looked at him with surprise. The guests
used all their artillery of wit upon him, without
eliciting a remark. The clergyman ate his dinner
quietly, apparently without observing the gibes and
sneers of his neighbors. One of them at last, in
despair of his forbearance, said to him: "Well, I
wonder at your patience! Have you not heard all
that has been said to you?" "Oh, yes; but I am
used to it. Do you know who I am?" "No sir."
"Well, I will inform you. I am chaplain
of a lunatic asylum. Such remarks have no
effect upon me."

A lady in Boston discovering that her
trunk had been broken open, and her valu-
ables stolen, called in her servant, a negress
of eighteen summers, and accused her of
having "access to her trunk." "Axes to
your trunk?" the indignant girl exclaimed;
"I haven't any axes, and never had any.
I've nothing but a hatchet to split wood
with!" The lady considered the girl too
innocent to accuse further.

An abundance of guests and limited lodg-
ing rooms caused Jimmie to be "slept out"
at a neighbor's. On arising in the morning he was
invited to remain at breakfast. "Well, I guess
not," he replied, "we have mighty good break-
fasts at our house when we have company."

Little Billy was told: "Never ask for anything
at the table. Little boys should wait until they
are served." The other day little Billy was for-
gotten in the distribution and was not served at all.
What could he do? Presently, after reflecting
seriously, he asked: "Mamma, when little boys
starve to death, do they go to heaven?"

MANUFACTURE OF ISINGLASS.—One of the most
notable industries of Russia depends upon the
sturgeon, the swim-bladder of which is manufac-
tured into isinglass. The bladder is first placed in
water, and left there for some days, with frequent
changes of the water, and a removal of all fatty and
bloody particles—the warmer the water the more
rapid being the operation. The bladders, on being
removed, are cut longitudinally into sheets, which
are exposed to the sun and air, being laid out to dry,
with the outer face turned down, upon boards of
lime-tree wood. The inner face is pure isinglass,
which, when well dried, can with care be removed
from the external lamelle. The finer sheets thus ob-
tained are placed between cloths to keep them from
drying, and are then subjected to a heavy pressure,
so as to flatten them out and render them uniform;
and after this they are assorted and tied in packets.
The packets composed of the isinglass of the large
sturgeon usually contain from ten to fifteen sheets,
and weigh a pound and a quarter; and those of
others contain twenty-five sheets, weighing a
pound. Eighty of these packages are usually sewed
in a cloth bag, or enclosed in sheet-lead.

THE SONGLESS BIRD.—The sparrow comes from
a good family, having a host of representatives in
Europe, and a full list in North America; but,
strange to say, it is the only scion of this large di-
vision of the bird tribe from which the gift of song
seems to have been wholly withheld. Everybody
who has strolled in the country during May and
June has listened to the sweet love carols of our
chirping and song sparrows, but no one ever heard
the sparrow in question utter a single sound that
possessed the faintest melody—nothing but that in-
cessant complaining chirp and distressful chatter
from one end of the year to the other—no inter-
mission, no rest. If it could sing like our cat-bird,
or even the clumsy robin, for instance, the opposi-
tion to it which now exists would, it is safe to say,
never have been aroused, because in all fairness,
waiving the question of song, the sparrow can not
be called any better or worse than the rest of its
kind, which are all plump, sober, dull-plumaged
birds.—[Harper's Magazine.]

Visit to a Pin Factory.

A correspondent of an American paper thus describes the mysteries of pin making:

"The pin machine is one of the closest approaches that mechanics have made to the dexterity of the human hand. A small machine, about the height and size of a lady's sewing machine, only stronger, stands before you. On the back side a light belt descends from the long shaft at the ceiling, that drives all the machines, ranged in rows on the floor. On the left side of our machine hangs on a peg a small reel of wire, that has been straightened by running through a compound system of small rollers.

"This wire descends, and the end of it enters the machine. It pulls it in and bites it off by inches, incessantly, one hundred and forty bites to a minute. Just as it seizes each bite, a little hammer, with a concave face, hits the end of the wire three taps, and 'upsets' it to a head, while it grips it out in a countersunk hole between its teeth. With an outward thrust of its tongue, it then lays the pin sideways in a little groove across the rim of a small wheel that slowly revolves just under its nose. By the external pressure of a stationary hoop, these pins roll in their places, as they are carried under two series of small files, three in each. These files grow finer toward the end of the series. They lie at a slight inclination on the points of the pins, and by a series of cans, levers, and springs, are made to play 'like lightning.' Thus the pins are pointed and dropped in a little shower into a box.

"Twenty-eight pounds of pins is a day's work for one of these jerking little automatons. Forty machines on this floor make five hundred and sixty pounds of pins daily. These are then polished. Two very intelligent machines reject every crooked pin, even the slightest irregularity of form being detected.

"Another automaton sorts half a dozen lengths in as many different boxes, all at once and unerringly, when a careless operator has mixed the contents of boxes from various machines. Lastly, a perfect genius of a machine hangs the pin by the head, in an inclined platform, through as many 'slots' as there are pins in a row on the papers. These slots converge into the exact space, spanning the length of a row. Under them runs the strip of pin paper. A hand like part of the machine catches one pin from each of the slots as it falls, and by one movement sticks them all through two corrugated ridges in the paper, from which they are to be picked by taper fingers in boudoirs, and all sorts of human fingers in all sorts of human circumstances. Thus you have its genesis:

"Tall and slender, straight and thin,
Pretty, little, useful pin."

GRAMMAR IN RHYME.—It is seldom that one sees so much valuable matter as the following lines contain, comprised in so brief a space. Every little grammarian just entering upon the mysteries of syntax, will find it highly advantageous to commit the "poem" to memory, as by so doing many a "black mark" will be avoided, for with these lines at the tongue's end one need never mistake a part of speech.

1. Three little words you often see
Are Articles—a, an, and the.
 2. A Noun's the name of anything,
A school or garden, hoop or swing.
 3. Adjectives tell the kind of Noun,
As great, small, pretty, white, or brown.
 4. Instead of Nouns the Pronouns stand—
Her head, his face, your arm, my hand.
 5. Verbs tell of something to be done—
To read, count, sing, laugh, jump, or run.
 6. How things are done the Adverbs tell,
As slowly, quickly, ill or well.
 7. Conjunctions join the words together—
As men and women, with or whether.
 8. The Preposition stands before
A Noun, as in or through a door.
 9. The Interjection shows surprise,
As oh! how pretty—ah! how wise.
- The whole are called Nine Parts of Speech,
Which reading, writing, speaking teach.

TO PRESERVE PEAS FROM BEING BUGGY IN THE SPRING.—Keep the seed two years; the weevils will emerge the first year, and the second spring the uncaten peas can be selected for planting. Or plant late for seed. The pea weevil is single-brooded, and hence the second crop of peas, or even an unusually late one, will escape this pest.

Commercial.

London Markets.

London, Nov. 10, 1879.

GRAIN.		Per 100 lbs	
Deithl Wheat	2 00 to 2 08	White wheat	1 85 to 1 90
Treadwell	2 00 to 2 08	Barley	1 00 to 1 35
Clawson	1 85 to 1 92	Peas	80 to 1 09
Red	1 90 to 2 08	Oats	1 03 to 1 06
Spring	0 00 to 0 00	Corn	93 to 1 00
Rye	0 00 to 0 00		80 to 80

FLOUR.		Per 100 lbs	
Flour, fall wht.	3 25 to 3 50	Oatmeal	2 50 to 3 00
" mixed	3 00 to 3 25	Cornmeal	1 75 to 2 00
" spring	3 00 to 3 25	Graham	2 75 to 3 00

PRODUCE.		Per 100 lbs	
Butter, crack	18 to 20	Cheese, lb	11 to 13
do roll	20	Eggs, per doz.	16 to 20
do Firkins	18		

MISCELLANEOUS.		Per 100 lbs	
Potatoes, bag	50 to 60	Turkeys	60 to 1 25
Onions, bush	80 to 1 00	Geese	40 to 60
Apples	35 to 50	Ducks, pair	40 to 50
Beef, 100 lbs.	4 00 to 5 00	Chickens	35 to 40
Mutton, lb.	5 to 7	Hogs, 100 lbs	3 50 to 4 00
Lamb	7 to 8	Hay, per ton	6 00 to 8 00
Pork	5 to 8	Cordwood	3 75 to 4 25
Wool	20		

English Markets.

London, Nov. 7.—Mark Lane—Wheat on the spot at opening, quiet; corn on the spot at opening, ditto. Quotations of good cargoes red winter wheat off the coast, per 480 lbs, sea damage for seller's account, less usual 2½ per cent. commission, 54s. Quotations of good cargoes No. 2 spring wheat off the coast, per 480 lbs, sea damage, for seller's account, less usual 2½ per cent. commission, 51s. Quotations of good cargoes mixed American corn off the coast, per 480 lbs, tale quale, less usual 2½ per cent. commission, 27s 9d. London—Quotations of fair average quality No. 2 Chicago spring wheat, for shipment during present or following month, per sailing vessel to Queenstown for orders, per quarter of 480 lbs, American terms, 50s.

Toronto Market.

Toronto, Nov. 7. Fall wheat—No. 1, \$1 27 to \$1 28; No. 2, \$1 24 to \$1 25; No. 3, \$1 18 to \$1 20. Spring—No. 1, \$1 23 to \$1 24; No. 2, \$1 21 to \$1 22; No. 3, \$1 17 to \$1 18. Barley No. 1, 70c to 71c; No. 2, 65c to 66c; No. 3 extra, 55c to 56c; No. 3, 45c to 47c. Peas—No. 1, 60c to 67c; No. 2, 64c to 65c. Oats—No. 1, 34c to 35c; No. 2, 33c to 34c. Corn—57c to 58c. Flour—Superior, \$5 55 to \$5 60; extra, \$5 50 to \$5 52½; fancy, \$5 40 to \$5 45; strong bakers', \$5 55 to \$5 6; spring extra, \$5 45 to \$5 50; superfine, \$5 05 to \$5 10; fine, \$4 60 to \$4 65. Hogs—\$4 50 to \$5 00. Butter—8c to 15c. Rye—65c to 67c. Wool 25c to 26c.

Montreal Market.

Montreal, Nov. 7. Grain—Spring wheat, per 60 lbs, \$1 29 to \$1 30; red winter, \$1 35 to \$1 37½. Corn, per 56 lbs, 55c to 56c in bond. Peas, per 66 lbs, 85c to 86c. Barley, per 48 lbs, inferior, 50c to 55c; malting, 60c to 65c. Rye, per 58 lb, 75c to 78c. Meal—Oatmeal, per 200 lbs, \$4 50 to \$4 60; cornmeal, per 196 lbs, \$2 95. Provisions—Butter, 14c to 23c; eastern townships, 21c to 25c. Cheese, 12c. Pork, \$14 50 to \$15 50 per bbl. Lard, 10c to 11c. Flour, \$5 00 to \$6 00.

Chicago Markets.

Chicago, Nov. 7.—Wheat, No 2 red winter, \$1 19; No 2 spring, \$1 18½ to \$1 19½ cash. Corn, moderately active, 42½c cash; 39½c December. Oats, good demand, 31c cash; 32c December. Rye, dull, 71c. Barley, dull, 81c. Pork, \$10 cash; \$9 30 to \$9 35 December.

New York Markets.

New York, Nov. 7.—Wheat, feverish, unsettled; spring, 1c to 1½c, winter, 2c to 3c lower; receipts, 59,000 bush; sales, 106,000 bush; No 2 red November, \$1 36½ to \$1 36¾. Rye, quiet, 86c to 88c. Corn, quiet; receipts, 11,000 bush; sales, 60,000 bush; 57c to 57 1-2c. Barley dull, six-rowed state, 80c to 85c. Oats, firm, 41½c to 43c for mixed western and state; 42c to 45c for white state. Pork, quiet, \$10 40. Lard, steadier, \$6 67 1-2c to \$6 70. Butter, 18c to 40c.

The great speculation on the prospect and prices of wheat is now settled down to real business; the enormous quantity landing in Europe being now double the quantity delivered at the same time last year, has tended to check the ardor of purchasers; we do not anticipate any rise in the price of wheat during the next two or three months. Meat of all kinds should, according to present prospects, maintain full rates. The rot is damaging potatoes in some of the Eastern States.

TURKIP CROPS IN THE FAR NORTH OF ONTARIO.—The Agricultural Society of the Township of Derby this year offered prizes for the best acre of turnips. The fields (fifteen in number) were examined by the judges during the latter part of last week with the following result:
First prize, 1016 bushels per acre, George Donald.
Second prize, 1060 bushels per acre, William Brien.
Third prize, 925 bushels per acre, David Hilts.
Fourth prize, 853 bushels per acre, John Duncan.

Little Falls Cheese and Butter Market.

Reported for the FARMERS' ADVOCATE by PROF. X. A. WILLARD
LITTLE FALLS, N. Y., Oct. 27, 1879.

The cheese market has been "booming" during the entire month. By the middle of the month prices had advanced to double those of September, or from 5c. to 5½c. to 11½c., and up to 12½c., as an extreme rate. On Oct. 20 the market showed even more excitement than the previous week; another advance being made, and factorymen holding firmly at 14c. This was a little above the views of buyers, and after considerable discussion on both sides, a concession was made by sellers, transactions for best goods ranging from 13½c. to 13¾c., and in one instance, for an extra fancy factory, 14½c. was paid. In the whole history of the cheese market here, there has never been such an advance in cheese in so short a time, and both dairymen and buyers have been greatly surprised. Some have regarded the great rise in the market as mostly speculative on the part of shippers, who having large stocks of cheese at 5c to 5½c, were desirous of forcing up rates, so as to unload and a big profit. One shipper is reported to have cleared from \$100,000 to \$150,000 by the late advance. But at the interior markets, we do not understand that any large profits have been made, as local and other buyers hardly had the courage to purchase and stock up cheese, holding for a rise—and most of the cheese was sold in New York, from week to week, soon after its arrival, at a small advance on the purchase price in the interior.

The main cause of the advance must be attributed to the severe, and almost unparalleled, fall drought, which has cut off fall feed, and reduced the water supply to the extent that many dairymen are forced to feed hay, and to haul water long distances in cans to meet the requirements of their herds. The drought has been general all over the dairy region of New York, very little rain having fallen since August, and the drought still continues.

The fall make of cheese in New York will be less than one-half what it was last year. Thus it will be seen, with a greatly reduced yield, and with the summer make all gone forward, from week to week, there is some substantial basis for a rise in prices. Again, as all branches of business show a better feeling and more activity, dairy products would be likely to sympathize also with advancing rates on other products.

The sales here during the month will aggregate about 50,000 boxes.

The advance on butter has not been in the proportion to that on cheese. Up to Oct. 20th the best prices reached for butter were, for fair to good lots, 22c. to 23c., and for extra fine and creamery, from 24c. to 25c.

One peculiarity of the market here is, that "farm-dairy cheese" has averaged, from week to week, fully as good as the bulk of factory. From 500 to 700 boxes per week are sold, and it is bought almost wholly to supply the "home trade." The market to-day (27th Oct.) has been very dull and inactive, the views of factorymen being above those of buyers.

Dairymen come on the market expecting to realize at least 14c., but buyers refused to bid more than 12½c. to 13c., and the result is that out of over 10,000 boxes offered, less than one thousand changed hands at from 10c. to 13c.—the bulk going at 12½c. Farm dairy cheese sold at from 12c. to 12½c.

There was a large delivery of butter, and prices here advanced from 3c. to 4c. above last week. Fair to good lots brought from 26c. to 27c., and extra fine and creamery, from 28c. to 29c.

The weather continues to be dry, and there is great scarcity of water on the farms. Our late advices from England are that stocks of American cheese are small and prices are tending upward.

On the 14th Oct., American cheese was quoted in London as follows:—Extra fine, 55s. to 56s.; fine, 52s. to 54s., and good, 46s. to 50s. per cwt.

Stock Notes.

Mr. A. A. McArthur, of Lobo, Ont., has been one of the most successful exhibitors at the American Exhibitions this year. At the great St. Louis Stock Exhibition he carried off four first prizes and two grand sweepstake prizes for his improved Berkshire swine. He has now attained a high position among breeders. This is due to his energetic persevering principles. He met with heavy losses at first, and many reverses; now he is envied by many who were in the foremost rank but now have to take a back seat.

The average prices of shorthorns with long pedigrees have been wonderfully reduced the past season, and they can now be had at what they are really worth. The days of fancy prices and paper pedigrees are not what they were. The highest price reported this season was obtained at the sale of the Earl of Dunmore's herd. Duchess 111th went for \$16,640, and Duchess 114th for \$14,040.

Mr. George Hood, of Guelph, has taken one carload of sheep for exhibition at the great fat cattle fair to be held in Chicago, U. S. The lot number thirty of the best sheep ever seen together in that part of the country.

CLOVER.—The prospects are that clover will be in good demand this year, and that prices must advance.

IMPORTATION OF CANADIAN CATTLE.—There appears to be some very contradictory statements in regard to the Americans prohibiting the importation of Canadian cattle into the U. S.

NOTE.—While in conversation with one of our leading fruit growers he informed us that he believed the cry about apples not keeping well this season was raised for the benefit of dealers, and that apples would bring a high price in the spring.

The total receipts of the Western Fair (London, Ont.) were \$11,073.54 over last year. This will leave a surplus on the year's business of from \$1,200 to \$1,500.

The long continued drought in the United States, extending over the greater part of the country, has made the fall supply of honey-producing flowers very scarce.

Potatoes will give as good returns for the careful selection of seed annually as any other plant.

An unusually large area of fall wheat has been sown in the Ottawa valley this season. It looks remarkably well, and should the weather be favorable there will be an abundant yield.

The Wheel of Fortune and other gambling devices were permitted by the mismanagers of the Colorado State Fair; \$300 were offered for horse-racing and \$25 for agricultural exhibits.

THE WHEAT CROP OF MINNESOTA.—The yield varies greatly in different sections of the State. From 10 to 12 bushels along the Mississippi, dropping from 8 to 9 back from the river, and from 4 to 5 in the south-west, north, and south of St. Paul, the estimated average yield is 13 1/2 bushels. Minnesota is said to be one of the best wheat-growing States in the Union.

Mr. Mewha, one of a party of ninety-two English farmers, who went to Texas some time ago, on the assurance that good farming land can be had there for \$3 per acre, has returned to New York disgusted with the land, which he says is fit only for stock raising. The rest of the ninety-two, with the exception of about twelve, have also left the land of promise.

A writer in the London Times declares—what general facts in European countries seem to justify—first, that there is no successful treatment of the grape phylloxera (grape flea) which will not at the same time kill the vineyard; and second, that the only feasible way to get even temporary relief from the pest is to root out and burn the vines and devote the land to tilled crops for at least two years.

NEW ADVERTISEMENTS.

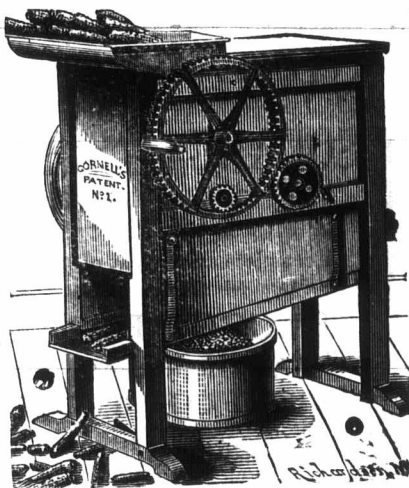
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Parties having any new varieties of Spring Wheat to offer, also choice samples of Peas, such as Strawberry Vine, Champion of England, McLean's Little Gem, Carter's First Crop; also good, clean Clover and Timothy Seed, will please forward sample and price. Address—CANADIAN AGRICULTURAL EMPORIUM, 360 Richmond-St., London, Canada.

Farmers! Feed your cattle with the Great Devonshire Cattle Food and they will feed you. See that the name "Devonshire" is on every box. Price one dollar. John Lumbers sole manufacturer, Toronto.

50 chromo, floral, glass, &c. Cards in case. name on all, 10c. Outfit 10c. DAVIDS & Co, Northford, Ct.

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L. D. SAWYER & CO. Hamilton, Ont.



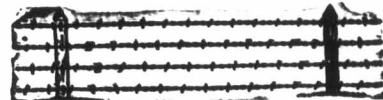
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LANDS FOR SALE.

MIDDLESEX.

Lot 12 in the 2nd Con of Westminster—150 acres; price \$11,500; a good useful farm. South-east part lot 12 in the 3rd Con of Adelaide—95 acres; price \$5,500. Part lot 25 in the 3rd Con West Nissouri—75 acres; price \$5,500. East half lot 28 in the 2nd Con—and west quarter lot 28 in the 3rd—West Nissouri—150 acres; Price \$6,000. Part lots 8 and 9 in the 1st Con of Westminster—230 acres; price \$85 an acre. Parts lots 50 and 51 in Gore A, Westminster—144 acres; price \$65 an acre. West half of lot 21 in the 2nd Con Adelaide, north of the Egremont Road—100 acres; price \$6,500. Lot 29 in the 12th Con of Biddulph—100 acres; price \$6,000; a capital farm close to Granton, known as the Jernyn Property. North-east quarter lot 23 in the 3rd Con—and north half lot 22 in the 2nd Con—of London—150 acres; price \$11,300. South half lot 19 in the 7th Con of London—100 acres; price \$5,600. South half lot 7 in Gore C, London—100 acres; price \$10,000. Part lot 14 in the 4th Con of London—64 acres; price \$10,000. South half lots 23 and 24 in the 11th Con of London—190 acres; price \$16,500. Part lots 9 and 10 in the 6th Con of East Williams—154 acres; price \$9,000. Part lots 12 and 13 in the 4th Con of East Williams—200 acres; Price \$13,000.

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North half lot 7 in the 3rd Con of North Oxford—100 acres; price \$8,000.

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South half lot 13—and south part lot 14—in the 8th Con of South Dorchester—120 acres; price \$7,500. Lot 12 in the 10th Con of South Dorchester—167 acres; price \$11,000. Lot 23 in the 1st Con of Malahide—190 acres on lake shore; price \$8,500.

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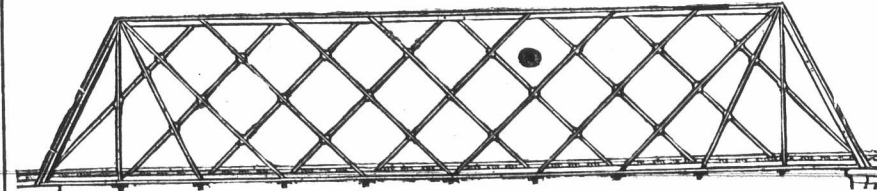
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