

FARMER'S ADVOCATE

PERSEVERE SUCCEED

AND HOME MAGAZINE.

VOL. XIV.

LONDON, ONT., DECEMBER, 1879.

NO. 12.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

THE FARMER'S ADVOCATE

Home Magazine.

WILLIAM WELD, Editor and Proprietor.

The Only Illustrated Agricultural Journal Published in the Dominion.

SUBSCRIPTION:

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December, 1879.

The present number finishes our labors on the fourteenth volume of your ADVOCATE. We have attempted to advance your interests in a fearless and faithful manner. If you believe we have done our duty and have given fair play to all discussions effecting your agricultural prosperity, we only ask for an expression of your confidence by a renewal of your subscription. We respectfully request every one that does not wish to take the ADVOCATE for 1880 to favor us with a notice to that effect and to STATE THEIR REASONS FOR DISCONTINUING.

We return our thanks to the many thousands who have continuously supported this journal, and can only say that neither pains nor expense will be spared to make it of more use and more interesting than it has been. Our past acts must be the best guarantee of our future course; the public must decide if we have been consistent and true to the standard we have raised—"THE FARMER'S ADVOCATE."

We feel positive that we shall have a great increase this year from letters already received. We trust that every one of you may, in remitting your own subscription, endeavor to add that of one neighbor with your own. It is from the increasing numbers that we have every year been enabled to expend more in improving the paper. We will strive to do our duty, and trust that every reader of the ADVOCATE will endeavor to do theirs. Returning thanks to all friends for past favors, and wishing you the compliments of the season, we remain sincerely and respectfully,

The Month.

We have had very changeable weather—from genial rains to a good body of snow and frost, and then to rain again. We had a few days sleighing, which made lively times while it lasted. In some parts the rain was needed. The dampness of the weather has checked the threshing of clover; what has been threshed is yielding a fair return. This open, mild weather is not quite as favorable for the fall wheat as frosty weather would be, as the growth is too luxuriant already.

The weather has been rather warm for the keeping of apples. We find that our snow apples have decayed sooner than usual.

We should recommend our farmers not to sell too much of their rough grain; rather buy a little from a neighbor than run short for your stock. You may require to keep your fat cattle a little longer until full arrangements are made by shippers on our international line to Halifax.

See that the root crops, apples and vegetables have air enough. We think there is more loss sustained by keeping our perishable crops too warm than by freezing.

With this month closes the year 1879. The past season has been one of marked prosperity to most of our readers. The failure of crops in Europe, and a bountiful harvest here has added greatly to your wealth and prosperity. At this season of the year, now you are enjoying so many blessings, would it not be well for you to look around you and see if there is not some poor, struggling, deserving and unfortunate creature in your midst that you could make happy? Is there a poor widow or orphan you could aid? Blessings attempted return four-fold to the giver.

That grasping, mean, miserly, you may say wealthy, being in your locality, is in reality the most miserable, low, degraded, and, in fact, the greatest object of pity. Do your duty. The first and greatest charities begin at home. Perhaps ten cents expended quietly and unobserved near home may be a greater blessing than a donation of \$1,000 that is to appear in print. Try this year to scatter a few seeds of kindness, and you will assuredly reap of the seeds you sow.

There is a crop that you must harvest, which will consist of thorns and thistles of a worse kind than you have ever met with; or the sheaves will be laden with more precious grain than gold can buy.

The United States Embargo on Canadian Cattle.

This step made by the American Government requires a little consideration from every sound legislator on this continent and in Britain. The Americans cannot say we have diseased cattle, nor that Canadian cattle are injuring their stock or market. If it is, as some of the American papers claim, put on just when the ice has not left an

opening for Canadian cattle except through the States, fortunately we have our own railroad to the seaboard. The greatest permanent injury this is to do will fall most heavily on the Canadian breeders of fancy stock, and on American farmers who wish to procure our stock to improve their inferior animals. Both of these will soon find other recourses. Our dealers will in a very short time have their own arrangements made to deal more directly with the consumers in Europe, and our wholesome meat will increase in favor and demand. Some parties, who desire other alterations to be made in the traffic arrangement, try to make it appear a great injury to us, and say that it must be bought up at any cost. We do not think the embargo will do us any harm, but that it will tend much to our profit if it is left on for years to come. Coercive measures are objectionable to true men. We would advise our farmers to be in no hurry to sell. Prepare to keep and feed your stock a little better for a short time. Dealers will immediately try to take every advantage at the present time. Keep your stock; be patient, and you will be no losers if the embargo is maintained permanently, although you may think at first that it is an injury.

Right or Wrong—What is Your Opinion?

The Hon. S. L. Tilley, our present Finance Minister, has been making a tour through most of the cities in the Dominion to ascertain from personal observation and personal interviews the real positions and requirements of the merchants and manufacturers. In this city persons having any improvements in the tariff to suggest were invited to the rooms of the Board of Trade.

As your representative we thought it not right to allow agriculture to be ignored, and as it has been our opinion that cheap corn would be of great advantage to our dairymen and stockmen, and all who desire to enrich their farms and make the most money from the present high prices of butter, cheese and meat, we suggested to the hon. gentleman that the duty on corn be removed. We stated that at the present time it would be especially beneficial, as the Americans had closed their ports against Canadian cattle. This, we thought, would be no injury to us, as we might just as well fatten our own stock and ship them to the British markets. By giving us cheap corn, we should turn many of our farms into factories of meat. Mr. Tilley inquired if we were fattening stock. We replied that we were not, but only spoke for the farmers. Mr. Tilley said he did not think the duty on corn would be altered, as there were many things to be considered; he would give that subject thought. He also informed us that he thought the American embargo on Canadian stock would be removed in a few weeks.

We think this visiting tour of Mr. Tilley's a step in the right direction, and that he is attempting to do what good he can for the country. But we live in hopes that the interests of the farmers may yet in some future day supersede the interests of party and that of cities in our Legislative Halls.

English Letter, No. 8.

[FROM OUR OWN CORRESPONDENT.]

Liverpool, Nov. 3.

We have just emerged from the throes of the annual municipal elections, which, in Liverpool and Birkenhead, are fought with all the political keenness of a parliamentary struggle. The same remark applies to many other towns. In Liverpool and Birkenhead the Liberals for the first time for many years have had it all their own way, and the knowing ones say it is a sure indication of how the general election, which cannot now much longer be postponed, will go. The farmers, too, are getting more independent in their tone, and cannot be relied upon to follow their landlords, especially if they are not amongst the rent-reducers, quite as faithfully as of yore. Of course this tendency cuts two ways, but all things considered, though I am not a strong politician either way, I do not think I can be far wrong in prophesying that the next general election will bring about as signal a change in the constitution of our House of Commons as did the memorable one of 1874.

Of matters specially interesting to your journal, this month's items are rather bare.

The London Dairy Show, held about the middle of the month, is highly spoken of by the agricultural press. It is worthy of note that according to figures given this country spends ten million pounds sterling a year in foreign and colonial tub butter; but as the whole of the United States and Canadian import is valued only at £1,300,000, it is evident what an ascendancy French, German and Dutch butters have in this country. It is stated to be due to the superior manipulation of the foreign dairies. The sensitiveness of milk and cream to any odors which may be in the air, and their consequent effect on the quality and flavor of the butter, is a point of which a note should be made by all producers of butter. If you want a first-class article, all bad smells in or near your dairies must be carefully avoided. The same remarks apply, in a less degree, to cheese-making. I regret to find that the Canadian display was not so prominent as it undoubtedly should have been. Perhaps this was owing to some extent to its being too early in the season for the finer qualities of cheese to be safely sent forward. Canadian producers should miss no possible opportunity of presenting their very best wares to the eyes of the consumers here.

I notice that a large quantity of Canadian potatoes are coming forward. English buyers are now busy in North Germany. A London salesman advertises that he shipped on the 18th ult. 1,000 barrels of potatoes from New York, and that upon their arrival at the London docks he will be prepared to sell them at 22s. per barrel of 160 odd pounds; 21s. per barrel for 20 barrels, or 20s. per barrel for 100 barrels. This will be some little guide to your farmers. There can be no doubt that the market here for really good potatoes this winter will be good.

A large quantity of fresh salmon has arrived here from Canada. As to its condition and quality I may state that a quantity was sent to Birmingham, where the retailers, forgetful of the fact that the close time had commenced here, tried to sell it as English or Scotch fish. The result was that the whole was seized, and an explanation effected with difficulty. If fish can be transported across the Atlantic as fresh as this, it is hard to say what perishable goods may not successfully be brought over. I notice a report that a Swiss chemist has perfected a method of keeping milk perfectly fresh for any period in reason. The object is to supply Paris, and even London, with the surplus of the

Swiss pasturages. Perhaps some enterprising Canadian may think it worth while to look it up.

Shippers of apples have been much pleased with the prices realized, and I hear of extraordinary quantities being shipped from the United States. If I may be permitted to venture an opinion, I should advise any intending shipper of any class of produce to this country to begin modestly, and to extend his operations with the growth of his experience. There is such a thing as glutting the market. A heavy shipment then results in loss, whereas a smaller operation would have yielded a fair profit.

The price of stock continues miserably low. This is no doubt largely, if not wholly, owing to the fact that many English breeders are being forced into the market in order to raise money. This, however, I anticipate, will result to the advantage of the Canadian shippers next spring, as certainly the store stock is being largely encroached upon through these necessities. Sheep have dropped 12s. to 15s. per head, notwithstanding that numbers are dying from rot and other diseases, largely due to the wet and cold season.

Throughout the country reductions of rents are taking place. Some landlords and their agents are trying to console the tenants in strange ways. At one meeting the extraordinary statement was made by an agent that, as prosperity was returning to the United States, freights were rising and shipments of grain to this country had ceased. This, as you may imagine, was received with loud cries of "No, no." I am glad to say that there are some signs of a return to prosperity in some branches of industry. This naturally means an increased demand for your beef, cattle, wheat, and everything you export.

The emigration agents are keenly competitive just now. Friend Kingsbury, of Texan fame, is very active, and seems to have unlimited supplies of money. He has had some rude rebuffs, but still plods on. New Zealand is also very busy. If Canada is to hold her own, the Dominion and Provincial Governments must keep going ahead, and not be afraid of spending a little money, for now is the golden opportunity of getting the right class of men.

Trade, Farming and the Professions.

The Monetary Times, in referring to the indiscriminate rush of young men from their fathers' farms to the cities, esteeming a mercantile or professional life the best means of making a fortune, and overlooking entirely the opportunity that a farmer's life affords for that purpose, says:

"To these we commend the early career of Mr. Henry Lasseter, who settled with his young wife in the bush in the township of Franklin in Northern Ontario five years ago. He had but \$4.50 in his pocket, and passed several weeks without being able to purchase glass for his shanty window. Today he has a fine farm of two hundred acres, thirty-five cleared; a good team, two cows and young cattle, a dwelling, a granary, and a barn 28x50; vegetable and flower garden; and in his barn and granary 110 bushels wheat, 100 of oats, 80 of peas, 150 of potatoes, 100 of turnips, and five tons of hay, besides Indian corn and vegetables. He is worth to-day \$4,000 as the result of the five years' thrift and industry of himself and wife, and in five more years he is likely to be worth \$10,000 and so on increasingly with the natural growth of the capital and value of real estate. Doubtless this couple worked hard; so must any one who would excel as a merchant or a lawyer. It is to the hardest workers that success most often comes. But the point we wish to urge is that for one who is willing to work, intelligently and assiduously, there is no need of joining the crowded ranks of the mercantile or professional classes.

Reports of Experiments at the Ontario Model Farm.

In the advance report to the Hon. F. C. Wood, Commissioner of Agriculture for Ontario, we have some scientific and practical facts on the production of grain, beef, and mutton at the Experimental Farm. Sec. V, page 25—"How much should be paid for steers to fatten?" gives us the report of an experiment designed to answer this very important question. One of the primary conditions of success in the case of not having any from your own breeding is to know the highest price it is safe to give for the particular animal, independently of the indispensable knack of choosing the best for the purpose.

To ascertain this there were purchased for the Experimental Farm fourteen head of two-and-a-half-year-old steers and two three-year-old heifers. They cost when delivered \$728, or an average of 4 1-7 cents per lb. They had had a month's feeding, were mostly Durham grades, and were in medium condition.

The estimated value of food which they consumed during five months, the time of the experimental feeding, from December to May, was \$569; the cost of attendance and bedding was \$69.50—total expenditure, \$638.50. The expenditure added to the price paid amounted to \$1,364.50. They were disposed of for \$974.80, or 4 2-5 cents per lb. live weight. In the five months they increased in weight 4,593 lbs.

This report does not speak very favorably of the profit to be realized from fattening stock. So far we see an actual loss in the five months' feeding of \$390.50. The only item of credit to meet this deficit is the manure made. There is submitted in the report a valuation of the manure, and of the materials used in food in this instance, according to the chemical money standards established by Dr. Lawes, of England, amounting to \$269. This valuation every practical man will at once condemn. Manure has its real value as well as other commodities, and no chemical standard can make it worth more. The old rule will be found in practice to bring a truer answer than any chemical valuation to the problem. One steer will give about one load per month, so that we cannot calculate upon more than one hundred tons at 75c each, or say \$75 in all. No practical farmer will value it higher. So that we see there is still a deficit of over \$300.

It appears, then, that after debiting and crediting every possible item, it does not pay to purchase steers at 4 1-7 cents per lb., feed them on some of the very best materials, and at the end of five months dispose of them at 4 2-5 cents per lb., live weight. Extra expenses were incurred in purchasing them, and the animals had to be sold at a time when the market was unusually low; the ordinary market value at purchasing being 3½ cents, and but for the falling market they would at sale have brought 5½ cents. As a rule, in present times it is a poor steer that will not pay to be bought in at 3 cents per lb., live weight, but can any one say that a superior one will do so at 4 cents?

We must look upon the result of this experiment as very detrimental to the interest of agriculture in Ontario. To the often asked question, "Does farming pay?" it is a direct answer in the negative. Farmers seeing the authoritative statement that store cattle purchased and fed on the Ontario Experimental Farm, to prove conclusively that there is a profit in fattening steers, see that under very favorable circumstances the fattening entails a dead loss. They will conclude that the less there is of stock-feeding the less loss will there be on the farm; and the result must be fewer live stock, less manure, and a more rapid exhaustion of the fertility of the soil. Nor will this be the only evil

result. The sons of farmers, who are already doubtful of the policy of their being farmers themselves, will flee from farming as a pool that swallows up the profits that should be the reward of diligent labor, but at the best returns no profit. Whether the loss from the experiment be from purchasing at over rates or selling under value, or whether the mode of feeding or the qualities of the animals be the cause, the result is alike unfortunate. Whence is it that grade Durhams fattened for six months on turnips, mangold, pea meal, corn meal and fodder, were sold at \$4.40 per 100 lbs., and caused the feeders a loss of \$330.15 on an outlay of \$794?

In the report of the experiment there is nothing said of interest of money, etc.

Some of our readers have had experience in fattening cattle, and we would like to hear from them on the subject.

The American National Fair.

[BY OUR SPECIAL CORRESPONDENT.]

Washington, D. C., Nov. 3.

The National Fair, chartered by an Act of Congress of the United States, was formally opened at Ivy-city in the suburbs of the Capital, at one o'clock p. m., on the 28th ult. The President of the U. S., who was accompanied by the Secretary of the Interior, the Secretary of State and other Cabinet Ministers, addressed the assembled people from the portico of the main building, and the National Fair was, by its President, declared open.

A grand "industrial procession" on the broad avenues of this city preceded the opening of the Fair. All trades, industries and professions were represented on wheels. The blacksmith at his anvil, the printer at his press, the farmer at his churn, the baker at his dough, the miller at his burr, the cobbler at his last, and among the brewers the jolly god Gambrinus astride of a huge cask, holding aloft a tankard of foaming beer. The procession was two hours passing a given point, and the streets and avenues were gay with flags and bunting and evergreens and throngs of people.

The principal feature of the Fair is the stock display. One of the "Princes of the turf" remarked that there never was at any Fair in America a better exhibit. The two Arabian horses presented to Gen'l Grant by the Sultan of Turkey, attract general attention and universal admiration. The horse named "Linda" is a dark iron gray, is five years old, and weighs 750 lbs.; "Leopard" is a light dapple gray, is nine years old, and weighs 900 lbs. They are unbroken and full of spirit, graceful as antelopes, with bright clear eyes and great breadth between. In the stalls just opposite to them are two more horses belonging to Gen'l Grant—"Bob Acres," sired by the celebrated "Ethan Allen," and "Prince of Orange," sired by "Duroc." These two are larger-boned, have less symmetry of form and less spirit and intelligence in the eye than their Arab neighbors. In the same stable is the running horse "Stampede," sired by "War Dance," dam "Sallie Morgan," from the Woodbine Farm, Ky. This horse ran at Louisville, Ky., four miles in 7 m. 33 s. He also won the Kener Stake at Saratoga, N. Y. Just beyond this horse is the superb stallion "Vassal," from Carrollton, Maryland; he is a mahogany-bay, bright as polished ivory, 16½ hands high, weighs 1,200 lbs., and is pronounced the handsomest horse in the State of Maryland. The first premium was awarded on him to the owners, E. F. Shriver & Co., for the best thoroughbred stallion at the National Fair. John W. Garrett, President of the Baltimore and Ohio Railroad, fills one entire stable with one of the most admirable exhibits of fine horses

in the country. The most attractive and interesting is the Arab mare "Saieda." She is 15 hands high, snow-white and of graceful, light form. She was purchased in Damascus, Syria, and imported to this country in 1857 by the late Wm. McDonald, of Baltimore; she was foaled in 1851 and is the dam of "Adinack," "Sultana," "Gulnare," and other noted horses. Notwithstanding her age, she is said to be a "clipper" animal. The two colts of "Saieda," in adjoining stalls, are "Adinack" and "Sultana," the first a silver gray foaled in 1864, and the latter a gray filly foaled in 1875. They are perfect pictures, and are driven on the road by their owner as a light buggy team; "Sultana" has trotted in 2.30. "Gulnare," the other colt of "Saieda," is a brown filly 18 months old, light as a gazelle and three-fourths Arabian. "Saladin" is a bay stallion, the pride of Mr. Garrett, sleek as a mirror, with an eye like a young eagle. He was foaled in 1869 by "Daniel the Prophet," out of the imported Arab mare "Esnea." The latter died several years ago. "Selim" is a beautiful bay stallion, and "Damascus" a chestnut horse, both from the Arab mare "Esnea." The beautiful jet black stallion "Hamlet" attracts the eyes of all; he is 15½ hands high, foaled in 1871, sired by "Joe Lane." "Hercules" is a heavy iron gray stallion, 16 hands high, compact and short coupled; the first premium was awarded on him as a heavy draft stallion. "Flora" is a graceful black mare, sired by the famous "Black Hawk Morgan." She made a record on the Chicago track of 2.51; the first premium was awarded on her as best quick draft brood mare. "Zoe" is a brown mare 15 hands high, light and spirited; she was sired by imported "Bonnie Scotland," dam imported Arab mare "Esnea." Her colt, "Young Esnea," 3 yrs. old, is said by the owner to be an exact image of the Arab mare "Esnea," whose skeleton is in the Yale College Museum.

The most curious collection among these rare and valuable specimens of horse-flesh is the little Shetland pony "Daisy," and her two colts. She is 12 years old, about the size of a Newfoundland dog, and was imported by Mr. Garrett; the two colts by her side—"Queen," aged 2 yrs., sired by the large stallion "Saladin," and "Princess," 1 yr., sired by "Damascus," before mentioned. Either one of these colts tower high above and would make two such as their diminutive Shetland dam.

While looking through the stables with Mr. Garrett, the card of Thomas Baily Potter, London, Member of the English Parliament, was handed to him, and in a few minutes the British statesman and his wife joined us, and were introduced by the affable American Railroad President to his distinguished "hosses."

In addition to the horses above named there is a splendid display of Kentucky thoroughbreds and a number of celebrated trotters, pacers and running horses from different parts of the U. S.

The light and graceful Alderney cows from the English Island of Guernsey, and a few heavy short-horn Durhams from Shenandoah Co., Virginia, are the chief attractions in the cattle stables.

The most complete exhibit is found in the Poultry Department. There are one hundred and twenty-five cages of chickens, and about one hundred cages of the different fashionable varieties. The exhibit of pigeons comprises the finest collection in America. For the best pair of light Brahma chicks, the first premium was awarded the Cumberland Valley poultry yards of Chambersburg, Pa.; these two chicks are 7 months old and weigh 18½ lbs. For the best pair of Dominique Cochins a first premium was awarded to Boileau & Heagy, of Middletown, Md. These chickens

are rare here; they are as large, but less clumsy than the light Brahmas. They are a cross of the Plymouth Rock and Black Cochin, are said to be excellent fowls for table, good layers and fine foragers; their average weight is from 8 to 12 lbs. There are several cages of Polish ducks and white China geese; the latter by their odd-shaped yellow head ornaments and singular gobble attract much attention. A pair of pure white Guinea fowls, a cage of Abyssinian Guinea pigs, and a pair of Angora rabbits, share the gaze and inquiry of the curious with their neighbors from China. The Angora rabbits, caged with a collection of English rabbits, have a long fine fleece like an Angora goat, and are as white as snow.

Among the rare collection of pigeons there is a fine lot of the carrier variety, including the celebrated "Red Cloud," "Black Hawk," and "Blue Dick, jr.," who flew at the Inter-State Race, June, 1879, from Max Meadows to Alexandria, Va., 240 miles air line, in 287 minutes. In the same building are cages of parrots, canaries, and 15 or 20 cages of dogs, in one of which is a Gordon Gip from Lord Drureale Kennel Co., of Cork, Ireland.

The fruit exhibit this year is a failure. In consequence of the short notice given by the Fair Association, and the lateness of the season, there are but a few varieties of apples and pears, and no other fruits among the exhibits. The dairy products, except the exhibits of butter, are all from adjacent farms. The exhibit of F. K. Ward, of the Alderney Dairy, D. C., is the only one worthy of mention; the milk used is from the imported Alderney cows, and the churn employed one of Blanchard's Factory Churns—having a capacity of from 40 to 50 gals., and turned by horse power. There are little golden-like cakes of butter with fine prints from Virginia, Maryland, Pennsylvania, New York and Ohio, but the sweet, fresh, golden butter of Pennsylvania made the red-card premium.

Among the agricultural implements which attract most attention among farmers are the Buckeye reaper and binder, from Canton, Ohio; the McCormick reaper and binder, and the Osborn self-binding harvester. All three machines cut neatly and bind in sheaves with wire, the cost of wire being about 25c. per acre.

There are some beautiful samples of flour made from Canadian wheat, but no samples of the wheat on exhibition.

On the 30th ult. there was a fine hurdle race, on Friday, 31st, a fox-chase, and on Saturday, Nov. 1st, a tournament, in which there was entered on the list a knight from every State. The race-course is pronounced by turf-men to be one of the best in the country, and before the Fair closes on November 6th, there will be some excellent trotting and pacing by celebrated horses for the several prizes of \$1,500, \$800 and \$400.

LOTUS.

Notice to Subscribers.

We have a large number of letters—over twenty containing money, and despite our attempts we cannot tell to whom to credit the money, though we always write to postmasters to inquire. If any one wishes to stop their paper at any time, they must send word direct to this office by postal card or letter, giving P. O. address and name. Sending a paper back without written notice is useless; so is notifying agents or postmasters. Old subscribers should not trust their money with any one, but mail it themselves. This will save loss and confusion.

Packing apples in plaster has been highly recommended. It tends to keep a low and uniform temperature, and prevent evaporation. Like lime, too, it is destructive to fungus growth. The plaster for next spring's grass may be bought in the fall, and used for apples, and be ready for sowing when needed in the spring.

Sundry Thoughts and Topics.

BY J. SEABURY.

The price of wheat at Emerson is only a trifle under the price of wheat in Minnesota, notwithstanding the U. S. duty of 20 cents and the drawback of 67½c. per barrel on flour manufactured from wheat imported in and afterwards exported in flour. In the face of these obstacles the Minneapolis millers are buying Manitoba wheat, paying the freight to Minneapolis, and then sending it forward to the European markets in the shape of flour. The Minneapolis millers are very anxious to keep this trade in wheat within themselves, from the fact that their flour has assumed a very important position on the Atlantic seaboard of the United States and also in the English markets. It seems to have special excellence, and commands ten per cent. more than any other brand. A prominent Ontario miller also made the assertion not long ago that Manitoba wheat was worth from 10 to 15 per cent. more than other wheat for milling purposes. This is a very important feature for the coming wheat-growers of our great North-West country, and will go a long way towards making up for the extra cost of transportation from that far-away country. This fact alone is of importance, as bearing on the prospects of the Great Lone Land.

Very few are aware of the prominent position that the dairy products of the Dominion hold in the exports of the country, and for the benefit of such we give a few figures. The fact is that the development of this branch of industry has been remarkable during the past ten years. This is especially the case with regard to cheese. The exports of this article have increased over 800 per cent. since 1869.

The following table will show the increase and fluctuations from year to year:—

	BUTTER, lbs.	CHEESE, lbs.
1869	10,853,268	4,503,370
1870	12,259,887	5,827,782
1871	15,439,266	8,271,439
1872	19,068,448	16,424,025
1873	15,208,633	19,483,211
1874	12,233,046	24,050,982
1875	9,330,770	32,563,924
1876	12,392,367	37,885,256
1877	15,479,550	37,700,921
1878	13,504,117	39,371,139

The following table will also show the value of these articles from year to year:—

	BUTTER.	CHEESE.
1869	\$ 2,342,270	\$ 549,572
1870	2,353,570	674,486
1871	3,065,229	1,109,906
1872	3,612,679	1,840,284
1873	2,808,979	2,280,412
1874	2,620,305	3,523,201
1875	2,350,127	3,912,982
1876	2,579,431	4,050,008
1877	3,224,981	3,897,968
1878	2,474,197	4,121,301

Total.....\$27,431,768 \$25,960,120

The value of this trade to the country needs very little comment, as it is plain to the most casual reader. The extreme low prices for both of these articles that prevailed during the early part of the past season will no doubt have the effect of somewhat checking any increase in the production.

No doubt a good many of our farmers who have been engaged in dairying the past few years are seriously resolving in their minds the question whether to continue on in the dairy or turn over to something else, say stock-raising. To such we would say that if you have no other reason than the low prices for your goods the past two years, by all means stick to the dairy business. If your farm is adapted for the dairy, and you have the appliances and help, you cannot drop it and go at

anything else without a certain amount of loss. Besides, beef is just as likely, and we think more likely, to fluctuate in price than cheese or butter.

What is the future in wheat is what many farmers would if they could have solved. We think many farmers are over-anxious on this point, or rather too anxious to get the last cent out of their wheat, and in fact any other produce they may have to dispose of: Farmers, as a rule, should be free sellers. They should lay down certain rules, no matter what they are, and adhere to them, and in nine cases out of ten they will succeed much better than by speculating as to the future of the market. Farmers may not think so, but there are hundreds of them in the country who for the means they have at their command are as great speculators in wheat and other grains as we have in the country.

The movement of all kinds of produce, especially wheat, has been simply enormous. The opinion is prevalent with a good many that one-half, if not more, of the wheat crop of 1879 has now been marketed. How far this is correct time will tell. The best authorities estimate that some eighty-five million bushels of the crop of 1879 have now gone forward, are afloat and in sight; that there are some ninety million bushels more to go forward between now and the first of July, 1880, which, spread over that time, would make ten and one-half millions per month. Added to this, Europe will require some ten millions more per month to come from other countries outside of America; or, in other words, that England and the other European countries will want at the rate of twenty million bushels per month for the next eight months, said supply to come from all available sources. Yet in the face of all this there is very little disposition on the part of English dealers to do business at the moment. How long they will remain in this indifferent position remains to be seen.

PRIZE ESSAYS.

A Monthly Prize of \$5

Will be given by the proprietor of the FARMER'S ADVOCATE for the best essay on a given agricultural subject, which will be stated in our columns one month before the essays are required to be sent in.

RULES OF COMPETITION.

1. Competitors for these prizes must be subscribers to the FARMER'S ADVOCATE.
2. All Essays must be legibly written, and on one side of the paper only; they must bear a distinguishing motto, and be accompanied by name and address of the writer.
3. Essays must not exceed twelve hundred words in length.
4. The essay to which the prize is awarded will become the property of, and be published in the FARMER'S ADVOCATE.
5. We do not undertake to return any manuscripts, unless the same are applied for within one month of the date on which the award of the prize is announced in this journal, and stamp sent for return postage.
6. The essays may be signed by the writers name in full, their initials, or under a nom de plume, but the full name and address of contributor must be known in this office.
7. Persons asking for information not intended for the press must send stamp to insure a reply. Responses will be brief, as our whole time is devoted to the public through the ADVOCATE.

The subject for which the Prize will be awarded in January will be THE BEST ESSAY ON FATTENING STOCK. The essay must be written from practical

experience, and be in this office by the 22nd of January.

We have sixteen essays in reply to "H. M.'s" queries, all of which possess much useful information. Some of them are so meritorious, giving different treatment from different sections, that we have concluded to insert six of the best. Then we will allow the sixteen competitors to be the judges, and will then pay the award. All real farmers will gain much valuable information that must tend to their benefit by carefully perusing the different opinions and results. We will take the liberty of inserting those we think the most deserving. Unless writers should desire us to return their manuscript, we will insert two in January issue and two in February issue.

Our readers should refer to questions asked in the last issue of the ADVOCATE; they will then appreciate the reply in this issue.

No. 1—Reply to Newcastle Letter.

LIME, SALT, PLASTER, CLOVER, ETC.

SIR,—In a letter from "H. M." several queries are propounded to the readers of the ADVOCATE. I have written the following lines in reply:

His first query is in reference to the use of lime. Now, in order to apply lime intelligently, it is necessary that we should understand its action and effect upon the soil. These may curiously be said to be as follows: It greatly hastens the decomposition of the organic matter in the soil, and in doing so renders it much more valuable to the crops; it alters the texture of the soil to a certain extent, proportionate to the quantity applied; it adds, of course, calcareous matters to the soil. From these considerations it appears that lime is applicable to all cases where there is an accumulation of undecomposed vegetable matter, as in poor old pasture, peat, moss moorland and the like. Lime is not required in soils which are poor in organic matter, nor in such as abound in chalk. *Lime does not add directly to the fertility of the soil, but only increases it by calling into activity organic matter.*

Now, let us consider "H. M.'s" statements, the first one being that he thought of putting it (lime) on the land just previous to sowing the wheat. This will answer, but not so well as applying it with the previous crop. The seed wheat also should be washed in a strong brine for a few minutes (say five), and if necessary on account of smut, should be again washed in a clean brine, when it ought to be mixed with one-twelfth of its bulk of fresh pulverized quick-lime. This kills all smut and ensures a rapid and early growth. Lime, previously slaked and cold, is generally spread by being raked from a cart into heaps about five yards apart, each containing about half a bushel. It must be spread immediately. In this mode of application the difference in the cost of applying slaked or unslaked lime can easily be seen, as slaked lime is twice the bulk of lime in the shell or lump, and in slaking its weight is increased one-fifth. Sometimes the lime is composed with other matters, but this is a calculation as to cost or necessity; if your soil wants calcareous matter apply lime. As to the quantity to be applied, this is variable, and a direct analysis of the soil would give more decisive information. A preliminary trial on a small scale is the best mode of proceeding. In England it is customary to allow for clayey lands from 250 to 300 bushels per acre; in France about 60 or 70 bushels at intervals of seven or eight years. The lime introduced is in a certain relation with the time during which the action of the earth is believed to continue, so that if the dose is small, it must be repeated more frequently. Near Dunkirk they use 50 bushels per acre every ten years; in one of the Departments of France they use some 9 or 10 bushels only, but then they apply it every three years. Salt and wood ashes may be mixed with lime, though the exact proportions had better be ascertained by estimating the deficiency of these constituents in the soil. In applying lime, the insoluble ingredients are set free, therefore we have to return to the soil what has been abstracted by the growing crop in the shape of potash, soda, the phosphates and silicates. Salt, as a manure, on some soils shows no benefit whatever. Wood-ashes are most usefully applied in connection with meadow lands; therefore it has to be studied out by each individual farmer whether he had not better put them on his lay. Of course, where ashes are cheap, hay cheap and grain most profitable, and the piece in grain needs ashes, the first application would be to the grain field.

Should lime be sowed after it is up? is another query. The value of top-dressing can only exist

in the fact that there has been an inadequate manuring or that there is a deficiency of some constituent. In this case top-dressing is valuable, of course; I am well aware of the fact that a top-dressing of guano, etc., on wheat is extremely beneficial usually, but I am supposing that "H. M." wishes to confine himself in this connection to the use of lime. As to the use of salt with a barley crop, I should not be inclined to use it at all. Barley should be sown after a heavily manured crop of anything except the other white grains, and farm-dung ought never to be applied directly to it. Barley succeeds best in a warm and dry climate, though gentle rains after sowing are beneficial, and perhaps in a very dry spring a slight sprinkling of salt would be of use in absorbing the moisture of the air. I should apply it when the barley was up. The application of salt to clover, if not injurious, would not be of much value, and if gypsum were applied in its place, the benefits would be more certain as regards the clover, and would be of a little value to the barley, provided, of course, that the soil needs it the first year.

Another query is as to whether it would pay to seed down every field each year. It is extremely difficult to answer this, as I do not know how he is placed as regards a market, and hardly understand what he means. If he means that he intends to take only one cutting of hay from a piece of land, he will pursue an extraordinary course of farming—will have to keep but little stock, or else will have to buy hay and manure; in fact, his question can only be answered with further particulars. Where hay is cheap it would pay to give up its cultivation altogether if a crop can be grown to give a more profitable return, say potatoes, and this could only be done where labor was cheap. However, I do not think it advisable under ordinary circumstances to have expense of seed, labor, etc., annually for a hay crop; it is better to go to a little expense in the matter of top-dressing your meadows when they begin to show a falling off in the return. A four years' rotation will bring them under the plow quite often enough.

In conclusion I would state that, being restricted by the dictum of the Editor of the *Advocate* to a column and a half, I have not written as fully as I should have liked.

HIRAM B. STEPHENS,
Slocum Lodge, St. Lambert, near Montreal.

No. 2—Reply to Newcastle Letter.

SIR,—In replying to "H. M.'s" letter regarding lime, ashes, salt, etc., I will endeavor to take up each question and opinion in the order in which they are given, or nearly so. Though lime has not been very extensively used in Canada as a fertilizer, yet in older countries it has been in common use for many generations, attended with beneficial and general marked results. It is only a few years since, comparatively speaking, that farmers in this country, and even yet in the older sections only, have come to the conclusion that something more than barnyard manure is necessary to maintain the natural fertility and productiveness of the soil. Lime is an essential element in the food of plants, being invariably found in their ashes, varying from 2½ per cent. in the grain of barley and Indian corn, 3 per cent. in wheat, rye and oats, to nearly 6 per cent. in peas and beans. A larger amount is found in the straw of those plants—the ash of wheat straw containing 6 per cent., while that of pea straw yields as much as 38 per cent. In root crops, the amount of lime is still greater; the ash of turnips containing 12 per cent., and that of the tops, 35 per cent. It is a singular fact, that although in nearly all soils lime exists in sufficient quantity to meet this demand, yet very marked results attend the application of caustic or slacked lime. This is owing to the burned lime acting upon the organic matter in the soil, hastening its decomposition, and making it available for plant food, and also because of its mechanical action. It has the property of rendering clay land more light, open and porous, which is a great advantage. On light, sandy soils it has the opposite effect, leaving them more compact. To get the best results, lime should be applied to the surface, because of its tendency to sink into the ground, harrowed well to mix it with the soil, and that immediately before the sowing of the grain. Unslacked lime would sooner bring about the changes which have been mentioned, but because of its being impossible to distribute it evenly, it is better to slack it with water, thereby having it more caustic than if air slacked.

Undoubtedly, ten bushels per acre would be better than none; and even that small quantity

might cause a fair increase in the first crop, but its effect would not be noticed in the succeeding crops, except on soils which are naturally deficient of lime and abound with all the other necessary elements of plant food. On such soils as these, a light dressing of lime would probably give a marked increase for a number of years, and that because it supplies directly the missing constituent of plant food. It is, therefore, advisable to follow the practice of British agriculturists, who apply from 60 to 150 bushels once in five or six years, according to their shift, or system of farming.

As H. M.'s farm consists of clay and clay loam, he may rely upon receiving a good return from heavy liming, without much danger of being disappointed. Prof. Johnson, in an article contributed to the first number of *Hearth and Home*, says:—"Lime has long been known as a substitute for drainage. Even level lying clays have been made friable and dry by heavy liming. In the Ober-Lansitr (Germany), and in the north of England and Scotland, this effect has been abundantly seen. Lord Kames noticed, seventy years ago, that some soils are rendered so loose by overdoses of lime as to retain no water."

Continued applications of lime must be made with care. There is a saying among English farmers as follows:—

"He who limes without manure,
Will leave his farm and family poor."

The reason of this is, that lime acting upon the organic parts of the soil, fitting them for plant food, causes it to produce larger crops for a time, and just in the same proportion as the crops are increased, so will the organic matter decrease; that is, the soil is being exhausted. The careful farmer can prevent this by manuring with barnyard manure and ploughing down green crops, thereby returning to the ground those elements drawn from it by the increased crops, which the lime from its stimulating nature has caused it to yield.

Regarding the mixing of salt, ashes and lime, no harm can result from doing so, if they are applied at once; but if allowed to remain mixed, chemical changes are apt to take place which may partly prevent the good results looked for.

The use of ashes will, in some cases, give a better return than lime, viz.: on soils lacking in potash and containing lime in abundance. Again, many maintain that salt is a cheaper and better fertilizer than either ashes or lime.

It would be better for H. M. and others to experiment with these separately and also mixed, and ascertain which is the most beneficial for them to use on their respective farms. In all cases they should be scattered on the ground before sowing the grain.

There is no danger whatever of the young clover plant being injured by salt, but has just the opposite effect. Very often we find clover, after making a good start in the spring, withers and dies during a summer drought. This can be prevented by sowing salt, as already stated, at the rate of 150 lbs. per acre, and after the plants are well up, sowing land plaster at the same rate. The plaster causes a rapid growth during the moist spring, and the salted earth retains the moisture, thereby insuring nearly certain success in getting a good set of clover, providing the land is in good condition.

It is very difficult to reply satisfactorily to the last query, seasons, conditions of soil, and prices of seed, being so variable. It certainly would not pay to sow seed when worth \$8 per bushel, on low, rich land, during a moist spring, as the clover would likely grow so rapid as to choke the grain, greatly lessening the yield. All the benefit resulting from it would be the fall pasture, as the land would not need it for manure, being already rich in vegetable matter. Neither would it pay to seed down uplands which would be ploughed immediately after harvest. With high lands, that are to remain unploughed until late in the fall, the case is different. It is an advantage to have those seeded, not only for the fall run of pasture they afford, but also that the clover roots manure the soil in some measure.

J. C., jr., Woodville P. O., Ont.

Mr. Purdy, N. Y., calls attention to the fact that soil and location had much to do with the desirability of all strawberries. On his land he found delicious fruit where tree leaves fall in autumn, but on the same patch not enriched the berries were unfit to eat.

Condition of Dairy Stock.

In determining the proper condition of dairy stock, it will be necessary to give special attention to three particulars:—

1. The yield of milk.
2. The general health of the animal.
3. The economic or paying element.

If a system should be devised that would promote an excessive flow of milk, but in its general effect weaken the animal or break down her constitution, such a system would have to be condemned, for the milk would not be healthy, and the system would, by inducing diseases among cattle, run itself out. Is this not already true of the excessive use of slops and watery roots? Too much green or laxative food, in cold weather particularly, would be dangerous to the health of the cow.

The conscienceless milkman might secure a large yield of milk of poor quality, indicating a low state of health, and he might claim that he could get no more for a good article, thus by his covetousness endangering both the health of his animals and that of his customers and their families. To such this article would have no weight, but to the honest dairyman it has force. Let him but persevere in making good goods from healthy animals, even if it be at a present pecuniary sacrifice, and in the end he will be the winner, for in the long run he will aggregate more milk, and his customers will, in due time, consent to an advance in price on the ground of quality.

Within the latitude and longitude, so to speak, of the three points laid down, the dairyman should have his choice as to circumstances. If cornmeal is cheap, and he prefers it to hay, then let him use it, if it harmonizes with the other conditions. On the other hand, the one who has more hay can make that his base. The dairyman near a mill can use his ground feed, while some may be so situated as to find it necessary to use whole grain. When oats are plenty and cheap, they can be chosen at the option of the feeder. The point insisted on is that the dairyman, whether he be giving tests or not, shall be entitled to feed the best he knows how within the limits mentioned, and give his methods to the public for comparison and general information. The practical outcome of this investigation will be to determine with reasonable accuracy the best kinds of dairy food, and the quantities to be used.

What is the best condition of the average dairy cow? She should be fleshy, but not quite up to the highest butchers' standard. The reasons are:

1. In that condition, as a rule, she will give the maximum yield of milk.
2. The milk will be of superior quality.
3. The animal will be strong and more likely to withstand disease, and be a good breeder.
4. After once reaching that condition she is more easily kept.
5. She will always be so nearly ready for the butcher, that little or no loss will be caused by disposing of her.
6. She will be more quiet.
7. It is more satisfactory to handle cattle in that condition.

Every animal requires a certain amount of feed to sustain life. On this amount the feeder can make no profit. Add to this amount and we have growth, milk or meat in return. The quicker we add and receive the profit of the added feed, the less time we are obliged to deal out the non-paying feed. There is enough wasted each year in this country by slow feed to afford a magnificent profit, if properly used. This is true in regard to pork as well as milk. It is like running an engine with lukewarm steam; it is like the merchant who sells only enough goods to give him a bare existence, when with an increased sale he could get ahead.—
[American Dairyman.]

SULPHUR FOR SHEEP.—An exchange says: Mix a little sulphur with salt, and feed occasionally to sheep. It will effectually cure sheep of all ticks. The same remedy applied to cattle troubled with lice will soon rid them of the vermin. The use of sulphur with salt well repays the trouble of keeping a supply for cattle and sheep. If a mixture of one part of sulphur with seven of salt be freely supplied there will be no trouble with vermin. You can give horses the mixture with good effect.

Dairy.

The New Departure in Cheese-Making.

BY L. B. ARNOLD.

As the effort made under the auspices of the Dairymen's Association during the season just past, to improve the quality of cheese, has been a subject of considerable interest and discussion, and been paid for at the public expense, your readers will naturally feel interested in a comprehensive statement of what has been aimed at and accomplished. Details, though very interesting to professional cheese-makers, would not be likely to entertain the general reader, and may be omitted.

The plan adopted by the Association contemplated an improvement in the quality of cheese by means of a new mode of imparting instructions to cheese-makers. The course heretofore pursued in educating factorymen has been to meet annually in convention and discuss topics relating to dairying in the presence of the assembled dairymen and manufacturers, to propound new questions and to answer such queries as those interested might have occasion to raise. This course has not been without great efficiency. It has been the means of developing an extended dairy interest and an amount of skill which has placed factory cheese-making in Canada fully upon a level with, if not above, that art in the States, where the factory system had its origin. This is no mean attainment. It is one of which not only cheese-makers, but the Canadian public, may well feel proud. It did not, however, satisfy the spirit of progress which had been awakened and developed by the course of improvements which had been going on, and a means for a more rapid advance was suggested. Instead of confining instructions to the abstract mode pursued in the conventions, it was proposed to make them practical and actual by sending an expert to central factories at which the cheese-makers in the vicinity might conveniently assemble, and where he might, for two or three days in succession, carry on in their presence the best modes of manufacturing known, so that they could see the work done in all its details and be able to repeat it in their respective factories. This plan was adopted, and, as far as carried out, proved as efficacious as anticipated.

Had nothing more been done than to present and impress the best processes of manufacture according to the current method, thus making the finer cheese of a few factories a more common result, the effect produced would not have failed to have given to the country more than an equivalent for all the labor and expenditure made.

But more than this was done. New points of manufacture, more in accordance with the advanced state of knowledge on the subject, were introduced, which have improved the quality of cheese and proved safer and more uniform in their operation.

In the old method, now current wherever the factory system prevails, the practice is to let the curd lie in the whey till fermentation sets in and acid becomes apparent. The fermenting whey reacts upon the curd, changing it to its detriment. It occasions, according to the extent of fermentation and development of acid, injury to the flavor, texture, digestibility and keeping quality of the mature cheese, and inclines the surfaces to dry up quickly and crack when cut, all of which, with other defects, tend to make factory cheese undesirable, to diminish its consumption and lower its saleable value.

It is one of the most unfortunate defects of the acid system of making factory cheese that it cannot work milk which is much varied from a speci-

fic condition. It is unable to cope with variations in milk occasioned by summer heat; by changes in food and drink; and by soil and climate. It fails with milk fresh from the cow. It must have a certain condition as to age, sweetness and quality before it can successfully proceed in making cheese which will not be seriously objectionable. The consequence has been that immense losses have annually occurred in midsummer from cheese so imperfect and short-lived that it has been necessary to force it into consumption, or it would spoil on the hands of the holders.

In the improved process all this is changed. The acid, regarded in the old mode as a *sine qua non*, is discarded entirely and avoided as far as possible, and the ill effects of its presence obviated, securing a product at all seasons of the year durable and in all other respects desirable.

Having had the honor of being selected as the expert to carry out the plan arranged by the Dairymen's Association, I have done what I could to execute it, and in the meantime to systematize a process of making cheese which would cover the management of milk in all the changing conditions in which it is accustomed to be received at the factories, so that the work of the factorymen might be more simple and uniform.

How well the effort has succeeded the cheese-makers in whose factories I have worked and the dealers who have handled the cheese can best testify. As might well be expected in the introduction of any new enterprise, some errors have occurred in its execution, but they have been neither serious nor difficult to correct. A few factories have undertaken the new and fallen back to the old course. When I closed my visits to factories in October last there were somewhere from forty to fifty running on the new process and successfully making a uniform and fine product out of milk in all its customary variations, with an ease and certainty they had never been able to do before. In some of the factories where this process was run through all the hot weather, when much of the milk came in in bad order, the cheese, nevertheless, were remarkably even and not a single one could be found to which any dealer who was a fair judge would object, or even desire to have excluded from a purchase—a uniformity which, by the acid process, could only be reached by the most rigid exclusion of all milk not in the exact condition that process requires.

Such has been the aim and character of the enterprise. The work has not been distributed over as wide a territory as at first intended, the time I could devote to it having been greatly abridged by unforeseen circumstances. It is hoped, however, that enough has been done to demonstrate the wisdom of the undertaking and to give it an impetus that will carry the improvements over the whole Province. The sequel must be left for the future to develop.

Inheritance of Qualities.

As to the value of the cow, in reference to the food she eats, Dr. Startevant says:

A cow eats food and milk is made in quantities according as the ancestry of the cow have been good or poor milkers. The "natural" or wild cow gives hardly enough milk for her calf, and not enough to satisfy a domestic calf. Feed the wild cow high and her milk yield is slight. Large quantity of milk comes largely through inheritance. It is the same with quality. The milk of different breeds has a different character. When a cow of any breed has enough food—considered in the elements of which the food is made up—if there is nothing lacking in the food that is needful to her growth and health, then I think it is agreed by the best authority that a mere increase of food will not change the quality of her milk, while it will increase the quantity.

Effect of Food Upon Milk.

No rational feeder would expect to affect the quality of milk in a few days, except by reducing or increasing its quantity of water. A cow in good condition would continue to give the same quality of milk for two weeks if fed wholly upon oat straw. Nothing is better known to intelligent feeders than that a good milker will draw on her own resources of flesh and fat to make up her secretions of milk when she is inadequately fed. Nature struggles against the change; yet, placed under changed circumstances, she will gradually conform to them. A plant whose *habitat* is near the sea will change the proportion of its constituents, or even substitute one constituent for another, when grown inland, or on soil of very different composition. Here potash is substituted for soda. Extra quality, being fed on slops from the brewery or distillery, will for some time give milk of normal quality; but this food being continued, the milk will gradually change its composition and quality, until it is wholly unfit for human food. This is a strong case of partial and deficient food, which has been proved so often; but it is easy to see that, if the cow conforms her production to this very deficient ration, she will thus gradually conform it, in time, to any ration having an excess or deficiency of any important elements in the food.

The practical feeder has so often seen the effect of food upon his cows, that he distrusts all so-called science which denies the existence of these facts that have so often come under his observation. And since the German experiments have been carried out for a longer time, and tested upon a larger number of cows, the conclusions do not differ so much from the general convictions of the best feeders.—[National Live Stock Journal.]

How Butter is Sometimes Tainted.

Winter and spring butter is often very much injured in flavor by allowing cows to eat the litter from horse stables. Cows are not unfrequently very fond of this litter, though it is impregnated with liquid manure from the horses, and if allowed, they eat it greedily; and the effect is that their milk and butter will be tainted with the taste of this kind of food, in the same way that the flavor is injured by eating turnips, but to a more disagreeable degree. If litter is allowed to be eaten, it should be given to cattle not in milk, and on no account should milch cows be allowed to consume other than the sweetest and purest food. Very nice butter makers are sometimes at a loss to account for stable taints in butter, especially when extraordinary precautions have been taken to have the milking done in the most perfect manner, and so on in all the processes of handling the milk until the butter is packed for market. Still the butter has a disagreeable taint, and the cause often comes from allowing the cows, when turned out to water and exercise, to feed about the horse stable, where they consume all the litter which, on account of its being soaked with liquid manure, is cast out of the stable.—[Rural New Yorker.]

Fattening Cattle.

In fattening cattle, we have preferred to divide the grain into three parts, and give it with twice or thrice its bulk of cut hay or other fodder. This mixes the concentrated with the bulky, and insures it all being raised and remasticated. But two feeds of grain and hay, with one of hay alone, are thought by many to produce as good a result.

Young and growing cattle are the better for some exercise, and should have the opportunity, daily, of stretching their limbs in the open air, except during storms. But fattening cattle need very little exercise, and may be profitably kept in stall during the three or four months of the closing period of fattening. In fact, it is expensive exercise to allow a free daily run to fattening cattle. It will take a considerable percentage of muscular force. Comfortable quiet must accompany the rapid deposit of fat.

In nearly all cases small-boned animals are good feeders, will mature early and possess fine flesh. On the other hand, coarse bones and large joints indicate late maturity, poor feeding quality and coarse flesh, with a large proportion of offal.

Agriculture.

Stock Diseases in the States.

LIFE OR DEATH—WEALTH OR POVERTY—WHICH?

The most important agricultural question for Canadian farmers of the present age is—Shall we open our ports to American stock diseases, to the danger of this and future generations? Plagues, pestilences and famine may be caused by the spread of diseases in animals. We have shown the dangers of having our stock contaminated by the various diseases existing in the States. There have been great attempts made, and no doubt they will be repeated, to allow American stock here, and some have even attempted to make it appear that our Canadian stock is already diseased; some wish to open the trade between the States and Canada at all hazards. We strongly advocate the prevention, if possible, of allowing any diseased animal to set foot on our soil.

The following important communication by an American veterinary we extract from the Michigan Farmer, which every farmer should read. After reading can we not infer that from the consumption even of the flesh of diseased animals these dangerous diseases may be introduced? When once introduced, who can tell what the end may be? Will not the purchasers of meat in Europe dread the use of diseased meat, and will not Canada, if she can keep her stock free from these diseases, be able to command a better class of consumers for her productions? If our Government will let us have cheap corn, the farmers will do their part towards increasing the "hum" and "boom" in the machine shops and warehouses. The Americans may keep our stock from their shores; we care not for that. We can manufacture and market our own products without their aid. The following is the article referred to, by G. W. Bowler, M. D., V. S., Cincinnati, Ohio:

TUBERCULOSIS, OR CONSUMPTION, FROM USING THE MILK AND FLESH OF DISEASED CATTLE.

Having had occasion to visit numerous cow stables in this vicinity, my attention was called to the wretched condition of many animals which are kept almost constantly tied up for the purpose of supplying the inhabitants of our city with milk, and after having carefully examined some of the most suspicious looking of the cows, I could but remark that it was not to be wondered at, so many persons, and more particularly children, suffered from blood diseases when compelled to drink the milk from such diseased animals. And not alone are we compelled to run the risk of contracting some malignant form of disease, from the fact of our having to use the milk of these cattle; but hundreds of poor people are likewise forced to make use of their flesh for food from the fact of their having to obtain that which calls for the smallest outlay of money. The cows made mention of no sooner became incapacitated from giving a sufficient quantity of milk, "arising either from poverty or disease," to remunerate the owner, than they are disposed of to the best advantage to a certain class of butchers, who bring them into the city, slaughter them, and are there sold for food to those who are not able to afford anything of the higher price. Now, were the cattle I speak of but poor in flesh and free from disease, it would not be necessary to make any remarks on the subject. But we have positive evidence that considerable numbers of these are affected with "Tuberculosis," or what is better understood as "consumption," and are slowly but surely dying from this terrible disease, which it is well known destroys scores of thousands of the human family every year. Yet thousands of poor persons, and I have no doubt many rich ones, are compelled "unknowingly" to take into their stomachs the flesh of these diseased animals, thereby laying themselves liable to contract the disease, and afterwards are at a loss to know how it occurred. Tuberculosis, or consumption, it is well known, is an hereditary disease, being handed down from parent to children for many generations. But I have no doubt most persons will reject the idea

that a large proportion of the deaths from consumption have been brought about by the use of milk and flesh of animals affected with the disease known as "tuberculosis." Many medical men doubted, and may still reject the idea, that the disease can be propagated by ingestion; but recent experiments by the veterinary profession will at once dispel all doubts on the subject, and it is to be hoped that the city authorities having the control of these matters will direct their attention to the milk which is sold as well as the diseased cattle that are regularly slaughtered and sold for food. In proof of my assertions I shall introduce numerous experiments, as well as the investigations of Fleming, Chauveau and others who have been interested in the subject, and I feel assured the results obtained will serve to convince the most skeptical of their truth. Chauveau being impressed with the idea that if tuberculosis is a virulent malady, it would almost infallibly be communicated through the digestive organs by reason of the exceptional facilities for administering in large quantities the matters containing the virus, framed his experiments with a view to test this notion thoroughly. In the first place he decided that his experiments should be made upon a species of animal in which "tuberculosis" was a natural and very common disease, endowed with all the seriousness and the characters it presents in the human species. With this object he selected the bovine species, as, in his opinion, this was the only way in which he could exactly appreciate the value of the results obtained, by comparing them with the characteristics of the natural or spontaneous malady. This choice, however, put him to the necessity of adopting special precautions to avoid experimenting upon animals already infected, and he was, therefore, compelled to resort to young creatures born and bred beyond all those influences or conditions which are supposed to favor the natural development of phthisis. As a further precaution, it was decided to place beside these one or more animals of the same species as means of check or control, and to afford the assurance that these experimented upon had not been exposed to any other cause capable of developing the disease after the ingestion of the reputed virulent matters. In 1868 four calves, aged from six to twelve months, were purchased from a locality where phthisis was unknown, and after purchase were examined with great care, but were found to be in excellent health and remarkable condition for their age. On the day after their arrival three received about thirty grammes of tuberculosis matter obtained from an old phthisical cow in one of the Lyons slaughter houses. The caseour, puriform and cutaneous mass from the lungs was poured in a mortar and dissolved in water and then administered from a bottle in small quantities at a time. The calves, for facility of description, were designated as Nos. 1, 2, and 3; that which was kept for comparison being No. 4. On the fourth day No. 2 had a profuse and fetid diarrhoea, but it was well on the evening of the next day. The administration of the tuberculous matter took place on September 19th, and at the commencement of October the following notes were made: No. 1 (twelve months old) has lost condition; it rests more; the respirations are quickened, and while the animal is lying number thirty-eight or forty per minute; the appetite is unimpaired, though respiration is always slow at the commencement. No. 2 (six months old and which had diarrhoea) appears to be in excellent health. No. 3 (six months old) is the same. October 5th and 7th. Nos. 1 and 3 receive a certain quantity of tuberculous matter from lungs not so much diseased as the others, but in which it was possible to discover recent tubercular infiltrations. No. 2 did not receive any, for if this administration would produce tuberculous matter, Nos. 1 and 3 would furnish the proof. It was hoped that No. 3 would escape the effects of the virus, as it was valuable in a pecuniary sense, and its sale would have diminished the expenses of the costly experiment. The result surprised even Chauveau by the rapidity with which it was developed. Calf No. 1 exhibited the first evident symptoms of tuberculosis. From October 9th there could no longer be any doubt as to the success of the administration, as, although it still preserved its appetite, it became emaciated in an extraordinary manner, while the coat became rough and staring, and the animal had fits of coughing morning and evening, particularly after drinking, and No. 2 soon began to exhibit all the symptoms of tubercular infection; its coat assumed the same aspect as in the other, and it lost its excellent condition, notwithstanding the undim-

ished appetite, and it coughed at times. The most remarkable symptom it offered, however, was in the appearance of the lymphatic glands of the neck, near the larynx. There was also at times an intermittent "roaring," which the slightest pressure on the larynx produced. No. 3 resisted longest, as it offered no appreciable derangement of health until October 25th. From that date, however, the phenomenon of tuberculous infection ensued with the greatest rapidity. In eight days the creature could scarcely be recognized, though it is true that it had slight diarrhoea and did not have the same appetite as the others. The cough was nearly incessant; the herilaryngeal glands became involved, and one of them, the left submaxillary gland, was as large as a goose's egg. During the whole of this time No. 4 remained in perfect health.

Farms and Farming of the Eastern States.

Our New England States were once nearly or quite self-supporting, and within the memory of the writer nearly every available stream and river was employed in running grist mills to grind our own corn and grain through the frosty days of late autumn and winter, and through the open doors might be seen issuing the flowery stream of the fast-whirling stones. Now all is changed—most of the time honored mills are replaced by planing mills and machinery for manufacturing carriages, boxes for merchandise, and for other industries, and what few remain are grinding *Western corn*, with almost the entire absence of the small grains. In one of your contemporaries may be found the following words bearing upon this point:—

"Only a few years ago, the agriculture of the East was self-supporting. We raised enough corn, wheat, beef and every other commodity for our own use. What is now seen in many places in Eastern and Northern New England, where were once these large farms, but weed-overgrown fields and dilapidated houses and barns? Then Ohio was in the far West. To-day one of the leading questions among the Ohio farmers is how they shall restore the exhausted fertility of her soil."—[N. E. Farmer.

Exhibitions and their Effect on Stock Breeding.

The Maritime Journal says: Competition in the show yard induces more exertion to excel, which leads to more care in selecting, feeding and housing their animals. As a proof of this we may refer to several of the local shows held, and particularly to those of the St. John Society, where the improvement was very marked, and which is in a great measure due to the exertions of the Society in holding competitive exhibitions. At this show several of the pure breeds were very well represented, particularly the Ayrshires and Jerseys in cattle, and thoroughbred and draught horses. A few years ago little attention was given to pure bred cattle; now the great interest of the exhibition was centred in them and the horses. The last few years Nova Scotia has given great attention to the annual exhibitions, and the good result is very apparent—we think the result of our cattle. You can gather full accounts of the vast increase of numbers in the past few years, but that is not all; there is such marked improvement in the caring for the stock and the whole turnout of the cattle, they come cleaned and indeed groomed. Of course there is plenty of room for improvement."

Farmers' Clubs.

The Connecticut Farmer (Hartford) writes: "We don't know why farmers cannot foster mutual understanding and mutual co-operation calculated intelligently on probabilities, promote our mutual instruction and protection, and lighten labor by diffusing a knowledge of its aims and purposes, without founding a secret society." We do not object to secret societies, but when we want to do all this our friend advocates, we claim the more open and free it is, the more it will diffuse a knowledge of its aims and purposes. This can be done as well by our farmers' clubs, with no expense of head centres or grand conclaves. Knowledge is better diffused by a free, open institution, and in no way better can it be done than by organizing a farmers' club.

Manitoba, No. 6.

We now purpose giving you a chapter about emigrants we met:

Manitoba and the Northwest Territory appear from personal observation to be receiving a better educated and more lucrative class of settlers than those who populated our older provinces. In fact this is absolutely necessary, as a poor man cannot so easily get there, and it requires far more cash to commence farming there than it did in the eastern portion of this Dominion.

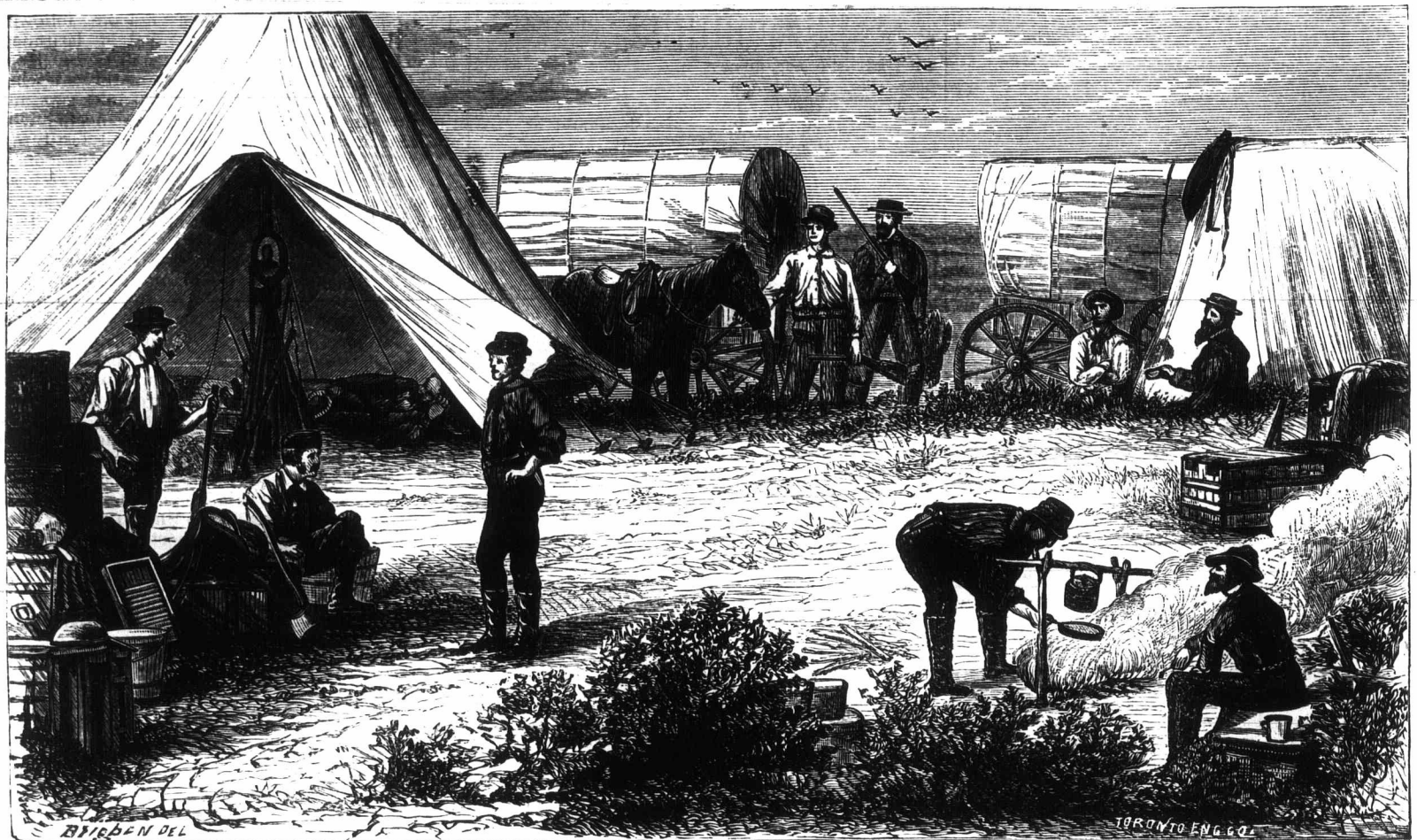
Are not the best lots up there taken up? we inquired.

Some are, but there will be lots of good chances for land for the next thirty years.

Mr. Plaxton appeared to us about as sound, sensible and practical a farmer as we would meet anywhere, and his remarks had a corresponding weight with us. We should much like to have

and to get everything in readiness. We got this tent photographed especially for this paper. Your humble servant may be seen seated by the side of the tent with a cup in hand, as the gentlemen kindly invited us to partake of their hospitality. A cup of tea was very acceptable, as we had walked a considerable distance—the weather being very warm—and we were afraid to drink Manitoba water. In fact we made up our mind, from accounts we had heard, never to use it. All the time we were in Manitoba we did not drink two table-spoonfuls, always taking tea. We would advise other visitors to avoid the Manitoba water. A person may habituate himself to it, but it should be used cautiously at first. In the open tent you see the Englishmen's guns stacked in the centre. These are destined for different purposes—some for the wild fowl, some for the Buffalo—but as distance lends enchantment to the view, we sup-

chase female stock from the United States Territories. They have heard glowing accounts of the pastures in that distant part of our Dominion. They have a paid guide and manager to aid them. They are all young men, active and intelligent, and if they can make this a success it will be a great advantage to this Dominion, for thousands more are ready to follow them. One of them told us that they had not come here as a last resort, but to try and start a paying enterprise. If they could not make it a success after a few years, they could return and have enough to live on. The enterprise is not, therefore, likely to fail for the lack of means or energy; for when an Englishman undertakes to do anything he would almost as soon die as be conquered. All will join with us in wishing this party success. We hope to be able to give a good report of them. One of their greatest difficulties appears likely to be the Indians in that part of the



CAMP SCENE NEAR WINNIPEG, MANITOBA.

gone to the Saskatchewan Valley, but time and weather prevented us from going further than we did.

Around Winnipeg many tents are erected, some belonging to the Indians, others that belonged to half-breed traders, besides numerous tents belonging to immigrants. We took a tour of inspection among them. In one, belonging to an Indian, was a poor boy, apparently in the agony of death. He had been galloping about Winnipeg and cutting up antics on his horse, had been dashed to the ground, and never spoken since. Perhaps this might have been the effect of firewater, for despite the law, which is very stringent if carried out, we saw plenty of Indians and squaws carrying their black bottles and drawing from them pretty freely, even in the main street of Winnipeg. They are all peaceable and tolerably happy, although they generally have a stolid or pensive appearance.

The tents from which we take our engraving were owned by a party of what they term young English "bloods." They had erected their tents to try camp life before starting on their journey,

pose it is verified in the picture that you see hanging among the guns. This, we were told, was "the girl I left behind me." You see outside of the tent the numerous boxes, washboard, dishes, tubs, pails, etc. One of the gentlemen was here posted attending the scullery department; another was cooking some ham; one brought in a plover he had shot. Some were dressed in knickerbockers, others had on leather leggings; some had their pistols and cartridges in their belts, others had their pipes in their mouths. The names of this party were: Messrs. Steadman, Everett, Coldwell and Curtis, from Hampshire; Mr. Darrell, from Worcestershire; Messrs. Pratt and Padmore, from the Isle of Wight; Messrs. Routledge and Koyle, from Cumberland.

These gentlemen, we presume, were all wealthy. Their plans were of a very enterprising nature, and we shall be highly delighted to hear of their success. They intend to go to the base of the Rocky Mountains, and attempt to establish a large cattle ranch there, on Canadian soil. They brought male stock from England with them, and intend to pur-

chase female stock from the United States Territories, who, as yet, have everything their own way.

MANITOBA WHEAT.

It was not expected that the United States millers would find it necessary to import wheat in this year of unprecedented abundance in the Western World, yet such is the fact. The millers of Iowa and Southern Minnesota are competitors with those of Quebec in the markets of our Prairie Provinces.

The States have had abundant crops, enough to meet all the demands from Europe; but the wheat south of the northern wheat belt is not equal to that in our Northwest, and that the flour for shipment may bear the brand A 1, the millers of Minneapolis are purchasing Manitoba wheat that its hardness may, when mixed with that of softer wheat of a lower grade, so improve it that the American flour may pass in the highest grade. This certainly is very complimentary to our Northwest farms and farmers. We may fairly expect that a few years will witness the fulfilment of the prediction that the great prairie lands of Canada will be the granary of the Old World, and that the teeming millions of Great Britain need not look beyond her own colonies to supply the deficiency of her home population.

(To be continued.)

Saving Hay.

When at the Industrial Exhibition in Toronto we took a round of inspection to see if there were any new improvements worth recording. As we have had many a hard day's work pitching hay, a few years ago, we put up a carrier and attached a horse fork. The contrivance did its work well for a short time, but the wooden and iron block got out of order, and that is vexing when one has work to do.

At the exhibition we noticed a new and much improved carrier, made entirely of iron, strong and durable. It was in operation, and did its work completely, taking the hay from any angle. We were so much pleased with it that we informed one of the proprietors if he would get up a cut of it, showing the elevator and mode of putting it up, we would insert it in this journal. Now he has brought his cuts, and we willingly insert them. They are so plain that they do not need a long description. Every person who has much hay to take care of should have a fork and tackle. Many have them already, and as the best is the cheapest, we are pleased to be able to show this elevator, as we consider it undoubtedly the best we have yet seen. It appears that we are not alone in this opinion, as this elevator, carrier and fork carried off the first prize at Toronto, Ottawa and London this year. Our friends in Manitoba will find it of great advantage, as they can, by erecting a few poles, run the fork and carrier, and thus stack their hay in quick time.

With this implement, the hay loader, and the mowing machine, it appears to us that we are not only living in a new world, but in another generation. We remember the wheat being all threshed by the flail, then winnowed by a hand wind cleaner that had bags tacked on four sweeps to make wind and a man would sift the wheat in front of the fans. This was the fanning-mill of our younger days.

Following is a description of the hay elevator and carrier: Fig. 2 represents the construction of the carrier, with its parts in position as when standing over the load and before the fork is drawn up to it. G and H are sort of grappling hooks, G being made stationary in the carrier frame. The grapple H and catch I being pivoted, are the only working pieces, and each acts as a lock to secure the other to its respective position.

The shoulder of grapple H, in contact with the inner end of catch I, securely locks said catch to the stop-block J, which is secured to the track. As the bail F of the fork-pulley is drawn up, so as to come in contact with the upper part of grapple H, the lower end of said grapple is forced through the bail and against the point of grapple G, thus freeing catch I so that it disengages from the stop-block, in doing which its inner end is forced up back of grapple H, securely holding it closed, and thereby suspending the fork with its load entirely independent of the rope while it is passing off over the mow.

When the carrier is drawn back from over the mow, the highest point of catch I strikes against the stop-block, thereby tilting the catch over, and the bail F forces the grapple H open, which again locks the catch on to the stop-block until the fork has descended and is drawn up again with another forkful.

Fig. 1 shows the carrier in operation. Fig. 3 represents a very cheap and simple construction for stacking with carrier.

Plants and Plant Food.

Some plants are surface feeders, i. e., their roots are short, usually small, and numerous, and only

least loss and the quickest returns, a surface feeding crop is the one to which to apply the fertilizer, and this crop should be followed by a deeper feeder the next season, which will bring the sinking food to the surface again. It is in this capacity that the clover crop is so valuable in a rotation. It is a great point to keep the plant food within the reach of the roots of the plant, and it can best

be done by applying it to a surface feeding crop, and follow it up (down rather) by a deep feeder, the roots of which penetrate far down.

The Unknown Agricultural Wealth of Canada.

Every day is bringing to our knowledge more of the hitherto undeveloped and unknown resources of Canada. Mr Cambie, C.E., returned from an exploration of Peace River and Slave Lake counties last week. He entered British Columbia by Skeena River, and travelled as far east as Lesser Slave Lake, following the 56th parallel of latitude nearly the whole distance. He describes the country through which he passed for 250 miles east and west, and 100 miles north and south, as fertile and destitute of rocks and hills. For five or six days the trail led through beautiful prairie land clothed with nutritious grasses, with here and there a poplar and willow copse. The soil is composed of white silt, with a covering of black loam from three to twelve inches in depth—an exact counterpart of Manitoba land. Fine pasturage abounds everywhere, the grass growing so thick as to form a sod. No white settlers, besides those at the Hudsons Bay Posts were seen. Very few Indians were met. At Fort Danvegan, 150 miles east of the Rocky Mountains, on the 56th parallel, very fine wheat was grown this season and harvested in August. Potatoes, cabbages and other hardy vegetables are abundant. Similar evidences of fertility and mildness of climate were observed at the other stations. A considerable portion of the fine prairie land country lies in British Columbia. From Lesser Slave Lake Mr. Gordon carried Mr. Cambie's report and despatches to Fort Edmonton.

The prospective supplies of grain are more than ample for every conceivable want. In many countries besides England—in France, for instance, Spain, Italy, Switzerland, and even Hungary—the harvests of this year have been bad, and large imports from other sources are required to feed the people; but with a curious felicity of distribution, nature has again illustrated the compensatory principle which runs through all her arrangements, has struck a fair average by blessing certain countries with an abundance which more than counterbalances the deficiency in others.

As a rule open ditches should be proportioned about as follows: If three feet in depth let it be four feet in width at the top, one foot wide at the bottom. This will give sloping sides at an angle of about 45 degrees.

Nine entries of "new varieties of wheat" have been made for the \$150 offered by the Royal Agricultural Society of England, the prizes to be awarded after trial under the Society's auspices in 1880.

There is indeed much sense, as well as nonsense, mixed up with this question of soils running down. It is, however, the non-reading and generally slack farmer who lets his soil run down, while the business farmer is not

only careful to keep his farm fully up to its natural fertility, but seeks by every means in his power to make it more and more productive year by year.

A shipment of snow-apples from London, Ont., sold in Liverpool at \$3.50 per bbl.; some have sold as high as \$7 per bbl.

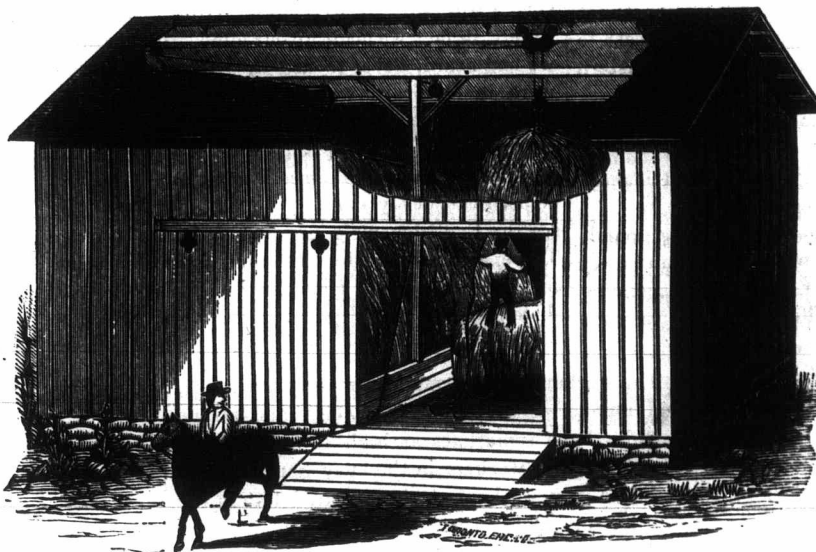


FIGURE 1.

penetrate the upper portions of the soil, as in the case of the onion, turnip, and the cereals, though the latter are perhaps medium, rather than shallow feeders. It is easy to see that such crops must

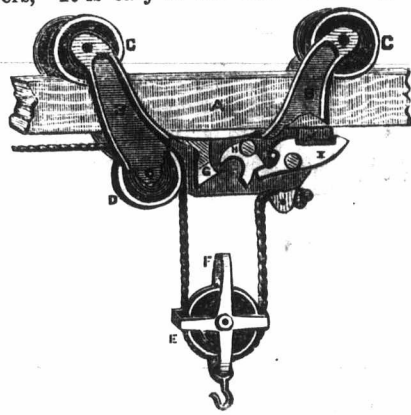


FIGURE 2.

derive their nourishment from that portion of the soil which their roots penetrate, and are therefore surface exhausting. On the other hand, clover,

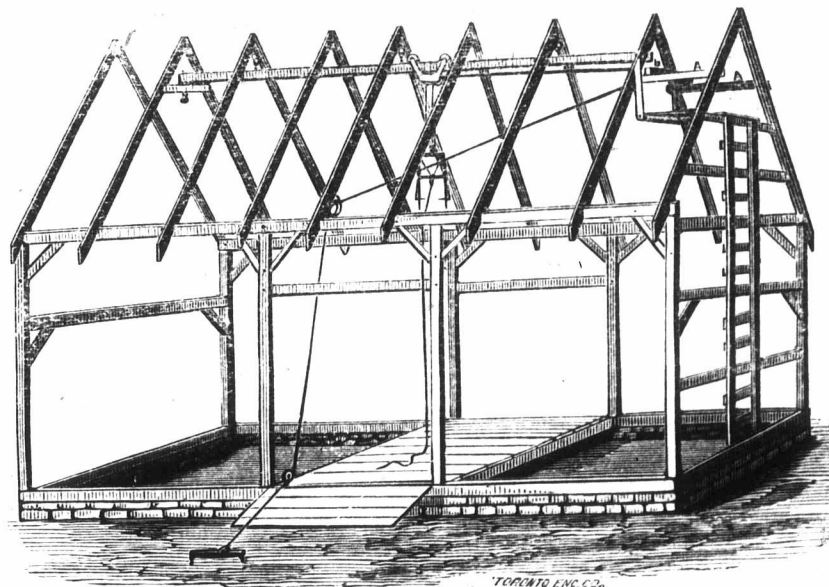


FIGURE 3.

lucerne, and the long roots, as carrots, parsnips, etc., are deep feeders, and exhaustive to the lower portions of the soil. These facts have a direct bearing on the succession of crops, and the application of fertilizers. If a fertilizer is applied to the land, it tends downwards, and its descent depends upon the solubility of the substance and the porosity of the soil. To have, therefore, the

Digging Ditches Economically.

When ditches are excavated with hand tools only, the work is laborious and the cost more expensive than when teams and machinery can be employed to perform a part of the work. Many years ago, when we were in possession of a farm, much of which required draining, we performed a large portion of this irksome drudgery by the aid of the team and the common plow. Setting stakes for the line of the drain, the plow was run along this line, turning a furrow, which was then thrown back out of the way by hand with shovels. The plow was then put through back again down the drain, the near horse walking in the furrow; this loosened dirt was also thrown back. We found, however, that this opened the ditch rather too narrow, and in cutting one since, proceeding in the same way, allowed the off horse to walk back in the cleared furrow, which, if the plow is set for a narrow furrow in common plowing, will cut about the right width. The plowing and clearing was continued (the near horse in the furrow) through three times more, when we found we could go no deeper because the double whiffletree dragged on the ground.

The clevis was then raised above the top of the beam and one horse put on, which by walking in the ditch drew the plow up and down once more, thus loosening the hard soil about one foot in depth. This work was done in less than half a day, and saved at least two-thirds the labor had it been dug by hand. Our ground is full of small stones, making the use of a pick requisite, and increasing the work of ditching to some extent above that of a simply clayey soil. After this experiment a long double whiffletree was employed (say six feet in length), with a horse at each end. Then the subsoil plow was drawn by a chain three or four feet long, extending from the whiffletree to the plow. With a subsoil plow the earth could be broken up to the depth of three feet. When laying small drain tile in a ditch it is a nice job to get a level surface among the stone and over the occasional soft spots of sandy clay found along the bottom. When laying tile of any size we first place them within reach along the bank, and then, facing the head of the drain, stand upon each one, and with one foot stamp it down until it will not rock or tip either way. On ground free from stones the work is simple and easy, but here we often come to a spot where a stone of some size has to be removed to get a level bottom. Here the tile will not lie firm without the hole is filled up with small stone and a flat one placed under the end of this tile, and the next one just low enough to keep the watercourse level. When the tile lies firm under our feet, as we stand upon it, we proceed to the next, and not before. In the sandy bottom soft spots larger flat stones are filled in to keep the course of tile to its proper place, so that they may not sink into the mud and thus become obstructed. When these soft, sandy places are over two feet in length we lay in a good sound board to keep the tile in the proper place.

As a covering for tile before putting on the dirt we have used straw, small stones and pieces of sod; but it is only the large cracks which need anything, and sods are generally most easily got, and, we think, will answer every purpose. After shoveling in a few inches of dirt, and treading it down, the remainder may be filled in by a plow with a long whiffletree to allow one horse to walk each side of the drain. Or some use one horse to a plow, and require the animal to travel over the tile. But this is a practice not to be commended, as there are numerous liabilities to displacement of the tile and crushing tender ones. The first dirt should be shoveled in the ditch by a man who will be exceedingly careful to avoid breaking tile by allowing stones to fall on them. If hard tile are properly laid the drain will remain serviceable for ages to come.—[N. Y. Herald.]

An English correspondent of the London Journal of Horticulture reports that three years ago he had for garden a very stiff clay, so unyielding in fact that the spade had to be dipped into a pail of water each time before inserting it. Now the soil is so friable that it can be easily turned with the fork. This improvement was accomplished simply by the admixture of coal ashes, and "a slight dressing of lime and soot."

Agriculture is to be made an obligatory study in all the elementary schools of France. This is a recent action of the French Senate, and was adopted by a majority of 254 votes.

The Apiary.**Lessons for Young Bee-Keepers.**

BY C. F. DODD, NILE, ONT.

There are three kinds of bees in a colony, queen, drones and workers; one queen, several thousand workers, and a part of the year several hundred drones. The queen is larger than either worker or drone, and has short wings and a long tapering body; her legs are longer than those of workers' and have no baskets on them to carry pollen. She is the mother of the colony, and has but one duty to perform in the economy of the hive, and that is to lay eggs, and she is capable of laying from 1,000 to 4,000 per day in the height of the honey season, and she will lay 100,000 in a single season. The queen will live about three years. Two queens have been found in strong colonies laying side by side.

The workers are the smallest of the three kinds, and number from 10,000 to 20,000, and strong colonies have sometimes as high as 50,000 bees. The age of the workers in the busy honey season is but a few weeks, but those reared late in the fall live several months. No worker under any circumstance lives more than six or eight months.

The drones are the male bees, and number from 500 to 2,000, according to the strength of the colony and the quantity of drone comb in the hive. They are large burly fellows, with wings as long as their bodies, and make a loud buzzing noise when they fly. They have never been known to sting any one for the very good reason that they have no stings. They never do any work, for their proboscis is too short to gather honey, and they have no baskets on their legs to carry pollen. The age of the drone depends on the condition of the colony, the supply of honey, &c. Whenever the honey ceases or becomes short the drones are generally killed, so the life of a drone may be a day, a week, or several months, according to circumstances. If drones are found in any hive long after other hives have killed theirs, it is an indication that the hive is queenless. In rare cases a hive will retain some drones till spring.

The changes that occur from the egg to the perfect bee are—the worker passes about three and a half days in the egg. It is then hatched—a small white worm, grub or maggot—and is called larva, a latin word that means mask, because the perfect insect is concealed or masked in that state. It remains thus for about five days, when the cell is sealed over by the bees, and the larva spins around itself a silken covering called cocoon. This is the third stage, and it is now called a nymph, pupa or chrysalis. It remains in this state till the 21st day from the time the egg was laid, when it comes forth a perfect bee or imago. The drone passes three days in the egg, six or seven in the larva, and comes out a bee on the 24th day. The queen passes three days in the egg, five in the larva state, and comes out a perfect queen on the 16th day.

Why have we not such notes as the following from Canadian farmers?

"A farmer in Bangor, Me., noticing that wheat was being picked from the heads of standing grain, and finding flocks of yellow birds flying about, shot some of them. On opening their crops he found only three grains of wheat, and, by actual count, 350 weevils. It is better that farmers know whether they kill friends or foes."

"The Franklin (Mass.) Farmers' Club have had a potato competition this year. All the contestants planted seed of Early Rose, and each chose his own mode of cultivation. A. W. Cheever got the largest yield, at the rate of 488 bushels per acre, by the use of stable manure, 400 pounds of sulphate of potash, and about 800 pounds of guano per acre, spread over the furrows in which the potatoes were planted."

Miscellaneous.**A Call for "Business Chickens."**

Why should not a chicken's standard of excellence be determined by its size, vigor, precocity, egg-record, toothsome-ness as a table-bird—its practical value—rather than by an arbitrary standard of artificial qualities which appeal only to the eye, and to secure which the practical qualities are impaired or ignored? Is the good time ever coming when a cow or a fowl may be beautiful, but *must* be useful? Would it not be well for poultry-breeders to have an eye to the aims and proceedings of the men who will meet in New York, December 9, to organize an association to reform the matter of the cow fancy? Will poultry-fanciers please take notice that the every-day poultry-keeper wants a practical "business-chicken," whose points of excellence shall combine size, vigor, precocity, thriftiness, productiveness, and such qualities, irrespective of any particular excellence of plumage, comb, claws, style, "symmetry," etc.? "Handsome is that handsome does" is as true of a fowl as of a cow. If the dairymen can change the standard of excellence for the cow, why can't the poultrymen do the same thing for the fowl, and put fancying on a rational, common-sense basis?—[N. Y. Tribune.]

Protecting Trees Against Mice.

Whenever snow falls to any considerable depth in winter, there is always more or less danger of mice gnawing the bark from the stems of fruit and other trees. During cold weather apple orchards in particular are frequently seriously injured in this manner, and it is very difficult to remedy this evil, although its prevention is easy enough; as the mice work mainly under the snow and near the foot of the stem, it is plain that if this part of the tree is protected there will be little danger of further injury. The best way to protect trees in an orchard is to wrap the lower part of the stems, from the ground upward, a foot or two with some material which mice either cannot or will not eat or gnaw; perhaps one of the cheapest materials for the purpose is tar paper, such as is used for roofing buildings, and which may be found in almost any country village as well as in cities; it can be cut up into strips of the size required to go around the trees and then tied in place with strong twine. Where this material cannot be conveniently obtained, strong broom straw or manilla paper may be used, by first coating one side with coal tar and then applying it as in the first instance, keeping the tar on the outside. Bark peeled from other kinds of trees, old pieces of tin and sheet iron can also be employed for this purpose, but tar paper is the most readily applied and removed. A few hours work in protecting the trees against mice may be the means of saving orchards which have taken years of waiting and much money and labor to produce.—[Agr. World.]

CANADIAN SHIPMENT OF CATTLE.—The benefits to Canada from having a direct line of communication with Canadian ports accessible at all times, is every day becoming more visible to all, in the Dominion and beyond her limits. Our republican neighbors, who, without any possible reason now prohibit our cattle from their territory, see that we are independent of them in the transportation of our stock. An American paper says:

Arrangements are being made by Canadian shippers to send their cattle to Halifax, which is the only winter port for the shipment of Canadian cattle, after the United States prohibition order goes into effect. The Dominion government are about to erect sheds for the accommodation of shippers.

SHRINKAGE OF FARM PRODUCE.—Corn loses one-fifth by drying, and wheat one-fourteenth. From this the estimate is made that it is more profitable for farmers to sell unshelled corn in the fall at seventy-five cents than at \$1 a bushel in the following summer, and that wheat at \$1.25 in December is equal to \$1.50 in the succeeding June. In the case of potatoes—taking those that rot and are otherwise lost, together with the shrinkage—there is but little doubt that between October and June the loss to the owner who holds them is not less than 33 per cent.

Only twenty-five persons attended the recent Shorthorn Convention in Chicago.—[N. Y. Tribune.]

Garden and Orchard.

Seasonable Hints—December.

BY HORTUS.

Anything left undone last month should be attempted and finished during this.

Strawberry plantations should be protected by covering well over with pine branches or any other convenient evergreen. Any kind of branch is better for the purpose than straw.

Grape vines unprotected should be laid down and covered. Save the wood trimmed off the vines for making into cuttings; also the currant and gooseberry trimmings.

Cions for spring grafting should now be gathered and packed away in sawdust in the cellar. Save the pumice or refuse from cider mills for sowing. There is always a demand for apple stocks at prices sufficiently remunerative.

See that cellars and pits are frost-proof. It would be a great pity if not a sin to allow stuff to freeze for want of a little care after all the trouble of raising it. Young trees will require an occasional looking after to see that the mice are not girdling them. The snow may be firmly tramped around them to prevent this. Apples will need examining in the cellars, particularly early winter sorts. Pick out any decaying for immediate use, and sell the rest. Keeping apples will be worth gold in the spring, and should be carefully looked after. The temperature of the roothouse or cellar where any are stored should be kept down almost to freezing point, and the air pure and sweet. Lawn mowers, spades, hoes, and all other tools and implements used in the garden should be collected, cleaned and oiled, and hung up so as to be ready when wanted.

The long evenings in winter afford capital opportunities for reading and studying literature printed in reference to the garden and farm. Numerous hand-books by the best authorities on the vine, apple or small fruits, or on growing roses or ornamental plants, are published, and are easily procured at a low price. These should be studied, and the knowledge thereby gained should be put into practice, or will come in useful when wanted.

A great lack of taste is manifest in too many of our country homes. No attempt is made at fixing up around the house. So much land lying waste out-doors, and none to spare to make a lawn. How easy this can be done need not be mentioned. A place is nothing without trees planted around it. There is no excuse for the barren places we too often see, when there are so many fine evergreens growing naturally in the woods that could be easily transplanted to adorn our homes. Our native elm, one of the most graceful and beautiful trees in existence, should always have a place near the house. Would that many of our farmers would plant the elm and the oak, the lovely scarlet maple and the wide-spreading beech around their residences, interspersed with groups of white spruce or cedar. What a beautiful country would our fair Canada become! Then could some future Canadian poet sing like Mrs. Hemans, of

"The stately homes of Canada, how beautiful they stand
Amid their tall ancestral trees o'er all the pleasant land."

In the greenhouse every one will be busy with propagating and potting. To have plants in bloom early in spring extra heat will have to be given. We agree with the system of first using the smallest pot the noted cutting will go into, shifting from that to a size larger as soon as the roots touch the sides. In repotting each time keep making the soil richer. A good mixture for potting

in, consists of two parts loam or rotten sods, two parts partially rotted manure, and one part sand. Always have a barrel of liquid manure handy—a little of this added to the water when watering will have a good effect. Keep what plants you have clean, never leave a decaying leaf on them; keep them in order and clean of any litter from stages. An abomination in a greenhouse is plants that have drawn up to the glass, or, what is termed by gardeners as "leggy." Pinch them back and give more room. To have plants free from insects and rust, fumigate often with tobacco smoke.

Being the last month of the year, the following questions occur to us as being pertinent for the farmer or the fruit grower to ask himself, and answer as closely as he can:

How many trees did I plant last spring, and what was the percentage of success, and to what can I attribute the failure of those that did not grow?

Have my trees and small bushes suffered much from insects, and what remedies did I use to prevent them?

Did I give my orchard and garden a liberal top-dressing of any kind of fertilizer last season, and was an improvement noticed in their growth of stock by this action?

Does my land need draining?

Were my trees properly pruned, or will they require pruning this coming spring?

Is my property well shielded from cutting winds, or have I planted any shelter belts for this purpose?

What kind of evergreens do best in my neighborhood, and can they be easily secured to set out afresh?

What varieties of fruits succeeded best with me, and what kinds sold well?

Have I disposed of my produce to the best advantage, or can I do better another year with the experience gained in the past?

Have I in travelling noted any particularly fine fruit, which it would pay me to procure trees of and grow? Have I noticed nice grounds, fine buildings, or convenient methods of doing work, good machinery, &c., and have I studied it up and procured all necessary information, so as to be able to use the same profitably?

Have I improved my system of farming over former years?

Have I noticed any definite result from the use of any particular fertilizer, or in the manner of cultivation of some particular crop?

Are my fences in good repair, or have I now good opportunities of procuring fencing material?

Are my buildings and sheds in good repair? Would not the application of paint or whitewash very much improve my surroundings?

Have I good convenience for watering my stock?

Have I induced any of my neighbors to take the FARMER'S ADVOCATE?

Am I insured?

Onions are best kept in a well ventilated building secure from moisture, by being placed on shelvings or racks twelve inches apart, one over the other, with suitable passage ways between. The onions are placed on these shelves about eight inches thick, and keep as near the freezing point as possible during cold weather, and as cool and dry as possible before that time. They may be kept in a dry, airy cellar, in the same manner. Indeed they may be frozen solid and remain so all winter if kept dark and not allowed to freeze and thaw alternately. They should not, however, be handled until they have thawed out naturally, and without exposure to the light.—[N. Y. Tribune.

It is said that one bushel of beets added to nine bushels of apples makes cider richer, and of superior flavor to that made from apples alone.

On Seeding an Orchard.

To seed or not to seed, that is the question so long mooted and answered affirmatively by some and negatively by others: i. e., whether it is best to seed the orchard.

Mr. William Saunders, in a paper recently read before the Potomac Fruit-Growers, has, I think, solved the question; and as it is so plainly and handsomely done, I am sure that your readers will thank me for copying his remarks, which, though treating of one kind of fruit, is equally true of all orchards. He says: "As to the treatment of apple orchards, we know that when they are established on light gravelly or sandy soils they require periodical applications of manure, that the ground should also be kept loose by shallow plowing, and afterwards to be surface-stirred with the harrow or cultivator,—all of which is requisite to maintain a proper degree of fertility. We have learned that to sow grass on the surface of the orchard planted in such soils is simply the first step towards the destruction of the trees so far as regards their fruit-bearing capacities. Of course we are now considering ordinary condition and management; for it is quite practical, merely considering it as a question of possibility, to so enrich the surface of even the lightest of soils as to obviate necessity of further surface-culture.

On the other hand we may imagine the case of an orchard placed in a condition of things very much the reverse of the one we have considered. In this the soil is a rich loam, perhaps with a preponderance of clay in its composition, and that the trees are growing vigorously, and for some years have been making a great quantity of wood and but very little fruit.

When a case of this kind occurs we know that in order to produce fruitfulness we must, by some means, weaken the growth, and the most available means is to cover the orchards with grass; this will have a tendency to check the growth of the shoots, and, as a consequence, favor the production of fruit.

This is in accordance with the general law, "that whatever tends to weaken a plant favors the production of flowers and fruit, and whatever tends to the luxuriant growth of leaves and branches is unfavorable to the production of fruit."

Therefore it is that the question as to whether orchards should be kept in grass or cultivated like a corn-field cannot be answered with regard to orchards in general; but when the question is applied to any particular orchard it admits of a definite answer, the condition of the trees (and soil) indicating what the answer will be.

Mr. Saunders speaks "by the book," for he has a pear orchard on his farm, a few miles out of the city, which his foreman seeded down without his knowledge, and which Mr. S. saw at a distance was damaging his trees.

I may be allowed a suggestion or two: if the orchard be in grass, mow the grass and let it remain on the ground. A heavy dressing of manure spread on the grass every two or three years will keep the ground in good tilth.—[G. F. N. in American Farmer.

Straw Matting for Hot-Bed Sashes.

Employ a frame, consisting of two pieces of two-by-four spruce joist for the sides, of the length required for the mat and of two transverse pieces morticed into them at the ends. Four feet will be found a convenient width for the frame. By resting this frame work upon a pair of wooden horses of convenient height the labor can be easily performed. A mat four feet wide should have at least four strings running across it. Screws are inserted at proper distances in the cross pieces, to which the strings are attached while the mat is being formed. The straw is placed on the strings, so as to have all the butts or lower ends come against the side of the frame, with the tops meeting in the middle, and so thin as to have the mat not more than three-quarters of an inch in thickness when finished. The stitches should not exceed three-fourths of an inch in width. The tying string ought to be wound on a reel, and there should be one of them for each stationary string. Take a little of the straw with the left hand and work the reel with the right first over the straw and then under the stationary string, bringing it back between the two strings, pulling tightly and pressing the straw, so as to have a flat stitch. In this way the work is continued until the mat is finished.

About the Hardiness of Trees.

I have often wondered why our nurserymen or horticultural societies have not supplied us with complete lists as to hardiness of the different varieties of fruit and ornamental trees, shrubs, etc. I am well aware that there is a great variation of climate and soil in the same latitude, but this can be taken into consideration by the tree planter and acted on. Of apple trees we have partial lists, but there are still many varieties of apple that are comparatively hardy that are not given in these lists. Of pear, plum, peach, cherry, and nearly all of our introduced ornamental trees, we can learn little or nothing except by personal experience. Now it appears to me that with a little observation by our nurserymen and horticultural societies, lists could be made out giving the comparative hardiness of all the different varieties cultivated. They could be corrected one with another until they were entirely revised and complete. Until this is done tree planters in the Northern States and Canada will be at a great disadvantage, having little or nothing to guide them except their own experience. We know that trees are killed by frost in different ways, but never when the wood is properly ripened. There must be a superabundance of sap in the trunk or branches before frost will cause any ill effect. Now it would be an easy matter for nurserymen to make a note of the time of ripening of the wood of the different varieties cultivated, and the percentage killed of each variety by frost.

The high state of cultivation in a nursery will generally cause trees to be later in ripening their wood than where they only receive an ordinary orchard cultivation; consequently notes taken on nursery rows would be of the greatest value in a season in which all varieties ripen their wood well. The comparative earliness could then be seen. Here in Canada the effects of frost are generally seen in three different forms:

First—A sudden severe frost setting in early in the season will expand the outside of the trunk while the heart is still unfrozen, and split the tree. The split is always on the side most exposed to the wind.

Second—The tree being expanded by frost, when the heat of the sun becomes great enough, through the course of the winter, a strip on the south or southwest side becomes thawed and contracts, splitting away from the part that remains frozen, or bursting the sap vessels, thereby retarding or entirely stopping the circulation in that part.

Third—The young shoots having more sap in proportion than the trunk or old wood, and being easier and more frequently thawed and frozen, the sap vessels become completely clogged, in which case the sun and air will soon dry them up.

So far as my observations have gone, this action of the sun on frozen sap vessels appears to me to be the true cause of the pear and apple blight, the sap vessels becoming partially clogged. So long as the strong upward flow of the sap continues, no effect will be seen; but as soon as the leaves have attained their full growth and the circulation becomes weaker, then a portion of the sap will remain stationary at the partially clogged point. Warm weather setting in, fermentation takes place, and we have blight.—[Gardener's Monthly.

GROWTH OF ROOTS IN AUTUMN AND WINTER.—It has often been placed on record in American publications during the past thirty years, that in this country the fibrous roots of trees grow during the winter. By the following from the Gardener's Chronicle, it appears that they also grow in this way in France, though it is not generally believed to be a fact in the experience of planters in England:—"M. Resa, as quoted by M. Micheli, says that the roots of deciduous trees grow in autumn after the fall of the leaf till the growth is checked, but not altogether stopped, by winter frosts. In the case of conifers the growth of the roots ceases in winter, to be resumed in spring."

A WOMAN'S REMEDY FOR PHYLLOXERA.—Mlle. Amelia de Bompar recently recommended to the French Academy of Sciences the cultivation of strawberries between the vines because there is found on the roots of the strawberry a kind of arachnid which destroys the phylloxera.

The Woodpecker in the Orchard.

Major Roscoe, a large fruit-grower of Rock Stream, N. Y., in setting forth his observations of the mischief wrought in his orchards by insect predators, said: "I saw, some years ago, an offer of one hundred dollars by the New York State Agricultural Society, for the best essay on insect pests, and I watched with interest for the instruction it would give me. When printed I sent for it, and was surprised to find that it presented no new facts—nothing that every farmer did not know before—so after reading it I threw it in the garret with the remark that the State Agricultural Society was very free with its money, when it paid a hundred dollars for rehearsing an old story. The book told how long the tree borer worked in the grub state before being metamorphosed, ready to propagate its kind, but it did not tell me any way to stop its ravages, so I had to continue the use of annealed wire, barbed on the end, used to thrust in the holes to draw the borers out. One day I found a cavity leading so far up the trunk that I thought it better to leave the borer in than to disfigure the tree by cutting up to the point where it was supposed to be lodged, so I left it and went a little way off to another tree, where I was busily at work when my attention was attracted by the hammering of a woodpecker on the trunk of the tree I had left. I watched the bird as he continued pecking until at last I saw him draw out the very borer that had gone out of my reach. I went back to the tree, and sure enough, the woodpecker had made a small hole about eight inches above the entrance where the borer had started, and he had drawn out and destroyed the pest that would have continued boring in the tree in spite of my effort to stop its work. Since then I do not allow any man to shoot woodpeckers in my orchards. They give me valuable aid and they should be encouraged." Major Roscoe is right.

A Pretty Window Plant.

Ladies who never tried the experiment may at a trifling expense have a beautiful hanging plant in the east or south window of the sitting-room, that will grow very thrifty and retain its rich green color for months.

Take a round piece of coarse cheap sponge, and soak it thoroughly in warm water until it is fully expanded. Squeeze out most of the water, and in the opened holes of the sponge thrust rice, oat, barley, grass, millet and red clover seed. Hang this improvised flower-pot where the sun will reach it during a portion of the day, and for a week after depositing the seeds above mentioned sprinkle the sponge lightly every morning to keep the inside damp, but not wet.

In a little while the seeds will commence to push out their spiny leaves from every part of the sponge; and falling down in graceful tendrils as they rapidly increase, there will soon be formed a pretty mass of flowing green fringe, that will remain bright and cheerful to the eye for a long time. If carefully sprinkled, later on, the clover will bloom before the mass decays at the roots. Now is a good time of the year to commence the growing of this simple but pretty hanging window plant.

GROVE OF WALNUT TREES.—In starting a forest of walnut trees it is much cheaper to prepare the ground well and plant the seeds where they are to remain. Plant them in the fall, covering three to four inches deep. Or if not ready to plant in autumn, mix them with moist earth or sand in thin layers, and place where they will keep moist and freeze if possible. I know that many tree-seeding growers advise to keep forest seeds moist, but out of reach of frost, but that practice is useless. Keep clean and stir the earth often, and a nice forest will be the result.—[B. P. H.

LIVE FENCE POSTS.—These are commended every once in a while. We have an idea that their advantages are purely hypothetical. Does any one know of a case where the owner has been satisfied with one for a continuous period of ten years? If so, we should be glad of particulars.—[Gardener's Monthly.

BEAUTIFUL HARDY FLOWERS.—Among the most beautiful of rare flowers in the garden are the Kansas Gay-feather, *Liatris pycnostachya*; *Helianthus mollis*, and *Heliopsis laevis*, which, though coarse in some respects, makes a gay appearance when mixed with other things.

Treatment of Evergreens.

The best time to remove evergreens is undoubtedly in the spring just as the terminal buds are opening. They may be removed safely until they have grown three inches. The next best time is in the latter part of summer or just before the fall rains set in. It is true, however, theoretically that they may be safely removed at any time of the year when the ground is not frozen, and practically true if extreme care is taken. Our opinion is that they are removed with least loss in the spring, as we have stated. As to mulch, it makes really little difference what the material is so it will not blow away or scatter noxious weeds. In the summer we have found no better mulch than good thorough surface cultivation for any plant.

If your evergreens are well grown they should not suffer from the effects of a blue grass sod. If well furnished with limbs to the ground but little if any grass will grow near the trees. If not, and the trees do not grow well, remove a thin layer of sod from about the trees, fill up even with good compost, and work it carefully in the soil, but not so deep as to mutilate the roots of the trees.

What we have said above in relation to planting evergreens, at the time of the starting of sap in spring, will apply to deciduous trees especially. It is the time for planting these, and should always be practiced when they are to be moved short distances. It however is not always the case, in fact is rarely the case that trees are to be so moved. In digging a tree by the best-known means very severe mutilation of the roots occur. Generally they must be packed and shipped long distances. This can only be done when the trees are at rest, or dormant. Thus the next best thing is that the trees be received from the nursery as late in the fall as possible, carefully heeled in, carrying the earth well up the stems of the trees. Keep the whole from being frozen severely—if the tops are shaded so much the better—and plant out in the spring, when the soil is in proper condition for working. Thus the ends of the roots will often be found calloused and new rootlets ready to be put forth immediately.

GROWING SPECIALTIES.—One of the arts of successful nursery or florist business is to find out something in demand, and which one can grow cheaper and better than anybody else. The English papers are noting the success of one florist who has given up everything else for Mignonette. No one can grow it as well and as cheap as he, and as there is a good demand for the London market, he sold last season twenty-four thousand pots of this sweet plant. We have in our country some who have acted on the same principle and grown wealthy. There is the Dingee Conard Company, in the rose specialty as an illustration. They found their circumstances just suited to the cheapest possible production of the plant in first-rate quality. They have sold low accordingly, but still profitably, and have their reward.

LANDSCAPE GARDENING.—M. Andre, who visited Philadelphia during the Centennial, and has studied gardening all over the world, has just issued in French an admirable work on landscape gardening. He makes a point which those who have observed must often have reflected on, that a beautiful plan on paper is often ridiculous when carried out—from the different plane from which the lines are observed. We have seen some delightful grounds which would be thought horrid on a plan.

A surveying party will shortly be started for the purpose of prospecting a route for the proposed Sault Ste Marie Branch of the Canada Pacific Railway. It is also understood that early next spring the route of the main line of the C. P. R. from the Canada Central Extension to French River will be put under contract.

PAULOWNIA IMPERIALIS.—This, which is called Blue Trumpet Flower in the west, is known as Vanilla Tree in Paris, because of the delicate scented flowers.

Pine-tree cones, containing the seed, are being exported in large quantities to Europe from British Columbia.

Stock.

Wintering Colts.

It should be the especial effort of every horse breeder within the next month, to see that the foals of the season are in proper condition to be easily wintered. If they are thin in flesh and unthrifty, it will be a difficult task to bring them through the cold and storms of winter safely. They will require much closer attention, more careful housing from storms, and better and more food than those that commence the cold season in good flesh. They should have been taught to eat long before this time, and by following the instructions which we gave a month ago, in reference to feeding, they can soon be got in fair flesh. We do not advocate high feeding on heating grains, with close confinement to the stable, but we do urge that liberal feeding on oats, with a little oil-meal or wheat bran occasionally added, and plenty of grass, with protection from storms, is essential to a perfect development of the colt. We reject *in toto* the doctrine that the way to make a hardy horse is to starve the colt—it is against nature. Starving and freezing in bleak fields during winter, on the one hand, and pampering on corn in warm stables without exercise, must be shunned with equal care by the breeder of horses. Both extremes are injurious—it does not pay either to pamper or starve the young things. It will not do to keep them always shut up in a warm stable, nor to turn them out in the fields, to take the weather as it comes. The "golden mean" lies in an abundance of wholesome, nutritious food, with plenty of room to romp and race and play at their own good pleasure, when the weather is fair, and a warm shelter to which they can resort when it storms.—[National Live Stock Journal.]

Intervals of Milking.

A Geneva correspondent of a series of interesting reports the particulars of a series of interesting experiments tried lately by M. Lami—a gentleman schooled in such matters—to ascertain whether or not the time-honored custom of milking twice a day is the best possible, and if three milkings would not yield more satisfactory results. He took two cows, one Swiss, the other Dutch, and analyzed their milk during three periods of ten days each, these periods being separated by intervals of equal duration. The first period he had the cows milked twice a day, the second thrice, and the third again twice. The analyses were made every day from an average sample of the milk produced during the day. The milk was weighed after each milking. In order to exclude errors and equalize differences, M. Lami afterward took the mean of the two periods of two milkings, and compared it with that of the period of three milkings.

It follows from experiments that three milkings give an increased quantity of butyric globules. Thus, the difference between two and three milkings in the case of the Swiss Cow (taking the mean of the two periods of the former) is very nearly one-fourth; while in the case of the Dutch cow, and the difference in favor of three milkings, equal to about 10 per cent. These results are susceptible of two explanations: either the butyric element is increased as a consequence of the increased mechanical action which an additional milking involves, or, during the longer interval between the two milkings, some of the butyric globules are reabsorbed and taken up by the blood.

Sheep should not be wintered with other stock. If with cattle, or horses, there is danger of their being injured by them. Some allow colts to be with the sheep for the purpose of eating up what the sheep leave. In the first place, the management of sheep should be good enough to prevent them from leaving anything. Nothing is of more importance than to have sheep eat up everything clean. But if they should leave anything, it is better to gather it up, and feed it to what stock will eat it rather than to let other stock run with the sheep.—[Western Rural.]

One third of all the cows kept by dairymen in the United States produce less milk than will pay their keep. These are simply a clog upon business, and were better given away than kept.—[Country Gentleman.]

Potatoes for Animals.

A writer upon this subject has said that "potatoes in the raw state ought never to be given to any animal, with the exception of sheep or geese." It is said "a goose will thrive better, and the flesh will be more gratefully flavored upon raw potatoes, sliced, than if more or less mainly fed upon any other article; while sheep will more speedily thrive on raw potatoes than on turnips; but, and especially in the beginning, raw potatoes will scour cattle and horses, and not unfrequently cause death, while there is no danger to do either from boiled or steamed potatoes." It may be true that raw potatoes are excellent for geese, and that they are good for sheep is well known; for of all animals none like a change from dry food to green in the shape of roots better than the sheep; and that they should thrive upon them better than the turnip, for the reason that, according to tables, the potato contains a larger proportion of fat and flesh-producing elements than the turnip. Thus a fair product of 200 bushels, or 12,000 pounds of potatoes, from an acre, are estimated to contain 2,640 pounds of material for the animal system, while the average yield of ruta bags of 20,000 pounds contains only 1,400 pounds; and a similar yield of common turnips yields only 1,400 pounds; so that relatively they stand to each other as, potatoes 2,640, ruta bags 1,440, and common turnip 840, or a little better than one-third the relative feeding value.

The chief advantage is obtained in feeding to mature animals; if bony structure is to be formed the turnip is fully equal to the potato. That an excess of potatoes fed to cattle or horses would produce some ill results could not be doubted; or if the diet was to be exclusively potatoes; but that a moderate quantity, fed in connection with dry hay, could produce injurious results, is not to be supposed. No doubt the boiling or steaming, which generally means an addition of more or less mild feed, would be very much more satisfactory. The same writer also says, "Pigs will not always eat, and never can be fattened upon raw potatoes, while some boiled potatoes, next to boiled peas, perhaps, will bring them to the greatest weight they are capable of attaining, and to greater perfection than any other article of food that may be continuously used with safety, admitting that from three weeks to a month's feeding upon corn, oats or barley is necessary to make the pork firm and impart flavor."

This is directly contrary to the experience of a successful pork grower who always estimated the value of potatoes as four bushels to one of corn, and would always feed them raw for the reason that he obtained more satisfactory results.

To boil several bushels of potatoes, and when still boiling hot mix a bushel or more of corn meal, makes a very satisfactory feed for pork.

Oil Cake in Cattle Feeding.

One of the most valuable aids to meat production is almost entirely disregarded in this country. The flax seed cake made here finds its market mainly in England. It is true that corn is cheap, but there are feeders in this country who have proved the economy of a small ration of oil cake. No less than 201,299 tons were received in Great Britain during 1878; and a large quantity besides, is manufactured there from imported seed. The sum of £1,625,863 was paid for them, more than \$3,000,000. The quantity exported from this country during the fiscal year was 342,446,499 pounds, valued at \$5,065,163.—[N. Y. Tribune.]

As showing the influences of feed on the fecundity of domestic animals, it is stated by Miles, that among the barren hills of the west of Scotland, two lambs will be born by about one ewe in twenty; whereas, in England, on the rich pastures, something like one ewe in three will bear two lambs.

Mr. Chas. Smith, of St. Catharines, is about to take to England 1,000 fat sheep. Five hundred sheep have already been collected, and he expects in a few days to complete the balance, when they will be shipped *via* Portland.

In the Island of Jersey the practice is to skim milk when it is twenty-four hours old; in Guernsey, a few miles distant, the milk is churned whole without being skimmed, after it has become thoroughly soured.

Winter Care of Young Stock.

All farm stock which has attained maturity shows at once any neglect, and the loss that must necessarily attend such neglect is so apparent to even the most negligent farmer that, on the whole, mature farm stock is fairly cared for. Aged stock cannot be injured where young stock are most vulnerable. A young animal may be ruined in form and growth by a few weeks of short feed. Where a matured animal only loses in flesh, a young animal is so retarded in growth that it takes much extra care to remedy the evil. It costs much more to start an animal growing than to keep it growing after growth has started. Calves were weaned several months ago, and possibly some have not recovered from the effects of weaning. Farmers are too apt to regard the weaning of calves as of no consequence. When the "sign comes right" the calves are weaned, and very probably no especial pains are taken to provide a proper substitute for the milk of which the calves are suddenly deprived. Some calves have been weaned and have not lost an ounce of flesh or been sensibly affected in growth, and consequently have attained much harder constitutions as the result of more substantial food. But too often the calves go into winter quarters not fully recovered from the effects of weaning, especially late calves. Such calves require peculiar care at this season. They should not only be fed sufficiently, but should be fed in such a manner that they will continue to grow. It is not enough that their mangers and racks are kept full of good hay. The best and sweetest of hay is not always enough for growing calves. The addition of a half-pint of ground oats or bran per head daily often pays well. They should be kept in a warm stable, well ventilated. The common manner of ventilating stables, by means of cracks in the doors and sides of the building, is not, however, the proper way.

Colts as well as calves suffer from lack of proper food; they lose in development of as well as in bone and muscle. Colts during the first winter should have a small allowance of oats daily and only the sweetest of hay. Calves and colts should have liberty to run at large in some convenient yard and have free access to salt and good water. They should be kept in the condition that is generally described as "thrifty." Colts should not be tied, but should be allowed to run loose in box stalls. The strong calves should not be allowed to crowd the weaker ones from the mangers and feed troughs. The young animal is growing, and should be kept growing from birth to maturity. In no other manner can a perfect animal be produced. If every member of the flock is not kept growing constantly, a few will fall behind others and become weak and crowded away from their food by the stronger members of the herd. If this is allowed to continue some will be lost during winter and others come out "spring poor." The proper way to raise stock is to raise good stock and give it the best of care, otherwise it will not be worth the cost of raising. Raise good stock, care for it properly, and it usually pays for the capital invested.—[Cor. Country Gentleman.]

WHERE CATTLE ARE COMING FROM.—Wonders never cease. If any one had told us that cattle would be raised in British Columbia, driven 2,400 miles to Evanston, Wyoming Territory, and then brought from there to Chicago and sold at a profit, we would not have believed it—and yet this very thing has been done. This is getting pretty near the north pole for raising cattle, and it is quite a little tramp to get them to market. What wonderful capacities our country has for stock raising! The climate is favorable, healthful and delightful. Short-horns, Herefords, Galloways—all kinds of breeds can be taken there without risk of loss by acclimatization.—[Rural World.]

While the lessons of the Chicago Fat Stock Show were many, important and interesting, the great fact made prominent was that the best beef for the consumer, and the cheapest and most profitable for the feeder, is made from the pure blood and grade Short-Horn or Hereford, which, full-fed from birth, is ready for the butcher at less than two years, and better at 18 months. Such steers when rightly selected and carefully handled, will sell for a cent or two more per pound than the fatter beasts of twice their age and nearly twice their weight. These young steers suit the consumer and yield a profit to the feeder.—[Country Gentleman.]



NOTICE TO CORRESPONDENTS.—1. Please write on one side of the paper only. 2. Give full name, Post-Office and Province, not necessarily for publication, but as guarantee of good faith and to enable us to answer by mail when, for any reason, that course seems desirable. 3. Do not expect anonymous communications to be noticed. 4. Mark letters "Printers' Manuscript," leave open, and postage will be only 1c. per ounce.

A Practical Farmer's Experience.

SIR,—As I often see very valuable information in the *Advocate*, and as you ask for communications, I will give you a description of my farm and my mode of management, and ask for information at the same time. My farm consists of 100 acres, half lot 19, 1st con. Westminster; the soil is a stiff clay. I follow mixed farming. My principal crop is fall wheat; I generally sow from 16 to 20 acres of wheat each year. I formerly used to summer fallow, but latterly have sown on pea stubble. Now the Pea Bug has become so destructive, I am adopting a fresh plan, which I think is better than either of the former. I intend to keep my land as much in grass as possible in the following manner: I purpose seeding down on every crop of fall wheat, to mow and pasture for one, two or three years; then cut the first crop of clover early, let the second get a good start, plow it under, turn it over again when well rotted, and sow the wheat on the rotten sward that has been turned up, giving it a good preparation with cultivator and harrow. I find the clover sown on this land takes better than when no fibres or roots are left in the ground. The frost does not harm the clover or kill it, as it does when sown after a naked fallow or on pea stubble. I also intend to sow plaster on the land in the fall, after the ground has been sown and the harrowing finished. I tried one piece in this manner, and it is the only piece that has taken this last season. I have plowed up a great deal of land this and previous years that had been seeded down by this means. I feel satisfied that I shall have a catch of clover every time.

One year ago I tried an experiment on my fall wheat. I spread my barn-yard manure on the surface of the land and plowed it under on one half of the field; on the other half I spread the manure on the surface after the wheat was sown, then giving it a rake over with the harrow. The portion of the field on which the manure was plowed under gave a much better growth to the wheat than the part where the manure was spread on the surface. I use three horses when plowing my ground, and I am contemplating plowing with four; formerly I used to plow with two, but results have now taught me the necessity of deep cultivation. I do not have as good crops on my land when it is plowed in a wet state—when a span of horses can turn it over, as when plowed in a dry state. I find it pays me to put on extra horses and plow my ground well.

Now I wish to know what is best to do with my fall wheat this year. It has such a heavy growth of blade that I fear it will smother and rot this winter. I turned in my stock when the ground was dry, but they only ate where the wheat was thinnest; the rankest parts were left untouched. Now the ground is too wet to let the cattle go on. I would like to hear the opinions of others. I have heard of some that have mown their wheat. Is it a good plan to mow it? I am at a loss to know what is best to be done with it. I was born on my farm, and never in my recollection have I seen such a rank growth as we have this year.

R. B. S., Westminster.

SIR,—I see with pleasure that your very useful journal has a fair subscription list in this island, and that you sometimes notice our agricultural products. This island, though it has been justly called the Garden of Canada, is not sufficiently known beyond its own shores. We ship extensively to New England, to Great Britain and to France the produce of our fertile soil. In two days last week, the 10th and 11th instant, we shipped from Charlottetown alone over 10,400 bushels of potatoes and 7,000 bushels of oats, mostly to France, besides pork, beef, mutton, fowls, &c. The correspondence in the *Advocate* is very useful.

A. P., Aberton, P. E. I.

A Dominion Agricultural Society.

SIR,—I have read with pleasure the suggestion in the last number of your valuable paper, to institute a Dominion Agricultural Society. Farmers need such an association composed of representative farmers from all parts of our country—men not chosen by Government or political influence. Such a Society would have weight in the councils of the nation, and would be a means of promoting the improvement of agriculture in all its branches, and thereby adding to the practical knowledge and the independence of farmers. The Royal Agricultural Society of England has within these fifty years done more to promote the improvement of agriculture, and to add to the wealth of the nation, than all the political measures and acts of Parliament. We cannot, it is true, expect to do at present all that that great Society has done, but let us at least follow her example and take a first step in the right direction. I have been a reader of the *FARMER'S ADVOCATE* for at least half a score of years, and am pleased with the independent course you have pursued, making the farmers' interest your sole aim.

There were great things expected from the Grange when it was organized. It was to unite all the farmers in one body, and it gave hopes of adding to our knowledge of farming by agricultural lectures and discussions at its meetings; but it has disappointed us. I was a farmer in the old country and here, and I joined the Grange for a time, but I became quite disgusted with it; its being a secret Society, with signs and passwords, was an objection to it as an Agricultural Society for the good of all farmers. And the great object turned out to be enabling its members to buy groceries and other articles at cheaper rates. In many instances it was a great injury to fair trade. The "Granger" newspaper started by the Society was more political than agricultural; it seemed impossible to keep politics out of the Grange. An Agricultural Society must be kept free from politics. If at all introduced they would inevitably prove fatal to its successful working, if not to its very existence. For its organization and its work there should also be County Agricultural Societies, and their members to elect the representatives to the Dominion Society, the qualification for membership being that the member be a farmer, an enrolled member of a County Society, and a subscriber to its fund of a fixed annual fee, and the number of members to be limited. The annual fee of a member of the County Club to be, say one dollar, and that for members of the Dominion, five dollars. These however are matters of detail and for future consideration. I hope others will take up this subject.

ERIN, Millbrook.

Feeding Hogs.

SIR,—Will you be good enough to let me know what grain is the best for finishing the fattening of hogs. Here, as well as in the States, the grain used for the purpose is exclusively corn. Bacon and all swine's flesh are quite inferior to what I was used to in the Old Country. There the meat was mixed, fat and lean; here the fat is one solid mass—it is rank and coarse-flavored, not tender and juicy. The difference I think is entirely owing to the feeding. Corn is a very fattening food, but the fat produced by it is very soft.

J. O., Sandwich, Ont.

[You are right in your opinion of the feeding properties of corn. It fattens all domesticated animals in less time than other grain, but the meat so produced is inferior to that from oats, barley or peas, either of which is better for feeding—not for bulk or for profit, but for the quality of the meat. Horses can be brought into good condition at less cost by feeding with corn than with oats, but it does not produce the same vigor or power of endurance. Those who feed hogs for their own consumption in Britain prefer barley for feeding for some weeks before slaughtering. If you have not barley, finish your feeding with oats. Either makes good meat, tender and juicy, and not too fat and greasy. Peas also make pork of superior quality, but pea-fed pork is not so general here now, the weevil having greatly diminished our pea cultivation.]

H. S., of Fitzroy, Carleton Co., Ont., wishes to know where he can procure strawberry-vine peas pure and entirely free from bugs. If any one has any to spare that fill the bill, they might send sample to us, and we will forward the same. Price and quantity should be stated.

Dust on Plum Trees.

SIR,—I was talking with a man a few weeks ago who has a large quantity of plums of different kinds. His orchard is located on the east side of a gravel road, consequently his trees would get the dust from the road most of the time, as the greater part of our winds come from the west. He informed me that the trees next to the road bore heavily, while those off from the road did not bear as well. Now I thought there might be something learned by this. My theory is that the dust from the road destroys or keeps off the insects of whatever kind they may be, which are such a prevalent source of destruction to our fruit. What say you?

SUBSCRIBER, Colborne, Ont.

[The fact tells more than theory. The greatest difficulty might arise in procuring the dust in sufficient quantities and applying it at a proper time.]

Remedy for Black Knot on Plum Trees.

SIR,—Having noticed in your November number an article on "Black Knot on Plum Trees," copied from the *Rural Home*, allow me through the columns of your paper to give the results of my observations. A few years since the plum trees in Cornwallis, Nova Scotia, were attacked with this disease, and the crops nearly ruined. The farmers tried some one thing and some another, but with no good result, and plum culture, like the growing of wheat in Nova Scotia some years ago, was reckoned among the "lost arts." But as the latter has been recovered, so might the former. Walking by a blacksmith's shop one day, I noticed a scrub bush, but what was strange, no black knot. This set me thinking; and when a few days later I came across an article, advising the use of the iron scraps which collect about anvils, in "Peach Culture," I put my observation of the preceding day and this fact together, determining that if iron scraps were good for one kind of stone fruit, they were for another. I at once went around the remaining plum trees which I had, and having carefully cut off with a knife all the black lumps, and in fact most of the limbs in which it appeared at all, I drove about a dozen old rusty nail stubs into each tree; the rustier nails being preferred, as I thought the tree would draw iron from them the quickest. The success of my experiment appeared at once and continued. Scarcely another lump appeared, and after having removed them and driven in a few more nails they entirely disappeared. I at once set out more trees, filling every tree at once with nails. The result is, the lump has appeared on none, and my plum trees are growing vigorously and bearing plentifully. I hope this may be of some advantage to some of your readers, or may at least incite discussion.

W. H. M., Somerset P. O., Kings Co., N.S.

[Since putting the above in type, we have conversed with our esteemed entomologist, Mr. W. Saunders, about this subject. He informs us that the nails have been repeatedly tried and no benefit has resulted from the tests made. He attributes the success to some other cause. He says the spawn of the black knot float in the air, and the curculio might not be able to penetrate the ground in the blacksmith's yard or along the road; that the dust alone he does not consider would be a sufficient protection against the curculio.]

Wire Fences.

SIR,—I am contemplating the erection of a wire fence next season, and am desirous of knowing if it would pay me to give the posts a coating of coal tar or not; also, is the barbed wire better than plain wire?

P. D., Chatham, Ont.

[Our opinion is that coal tar applied hot to timber that is not exposed to the heat of the sun or outside atmosphere, is beneficial, but timber exposed to the sun and weather is injured by it. It draws the heat, the heat opens the pores, and when moisture and heat penetrate decay is increased. We have seen some timber so badly decayed in a few years where it has been used in exposed places that we think it would tend rather to hasten decay than to retard it. There are differences of opinion about the barbed wire. Some object to it because it is apt to give stock a bad scratch or tear; others prefer it because the first scratch on an animal prevents any further attempt to interfere with it. If the plain wire is used stock will rush against it, sometimes getting their heads through the wires and thus damaging the fence. Our opinion is in favor of the barbed wire.]

Potato Starch.

SIR,—I received by this mail your October number, having had my attention drawn to the article on potato farina by your subscriber, Mr. Henderson, of Petite Cote.

I have been for some time inquiring if any one made this article in Canada, and as you request information I will give you my experience in this market. I may add that I am interested in the importation of starch from Canada, and have some tons now in store here.

We receive large supplies from Germany, the best quality of which we can sell at about £16 per ton on the spot. All our manufacturers of cotton goods use it, besides bleachers and calico printers. When you consider the number of works of this description in this locality, and the quantity of goods produced, it will perhaps give you some idea of the importance of the trade. Last month I called on one firm who had placed an order for two hundred tons for their own consumption. An order for ten or twenty tons is of frequent occurrence.

The manufacture of farina does not require much capital or labor, the chief thing being pure water. In my frequent visits to Canada I have often inquired about starch, but could not hear of any one engaged in its manufacture. If your readers require further information, I shall be glad to procure all I can, and send you samples with prices for your inspection. I notice in another part of your paper that several are engaged in its manufacture in New Brunswick. I shall be glad to have more information on that point. At what price can they produce it, what market does it go to, and how will it compare with continental productions?

Your paper has interested me so much that I intend becoming a subscriber, and will by this mail instruct one of our correspondents to remit the year's subscription.

F. C. E., Manchester, England.

[Should any of our subscribers wish to communicate with "F. C. E." on the above subject, by sending postage stamp the name will be furnished. We do not wish our correspondents to be troubled with all kinds of circulars and unnecessary communications.]

SIR,—Allow me through the columns of your paper to refer to the undoubted fact that agriculture is the mainspring of the country, and that the improvement in farming and the increase in the products of the soil, keep pace with the improving prospects of any industrial pursuit in the country. While we hear of increased employment given to operatives in the manufactories throughout the province, very little is said of the great increase to the wealth of the Dominion by the industry and industrial skill of farmers. We are not envious of the improved circumstances of manufacturers or other classes, but we do not like that our labors should be overlooked. It is said on good authority the increase of agricultural produce this year over that of 1870 has been fully fifty per cent., from the increased acreage and the abundant crop. Nine years ago the agricultural products were calculated at over one hundred and two millions of dollars; add to that one half that sum, or fifty per cent., and we have the very large sum of one hundred and fifty-three million dollars worth of farm produce from the well directed labor of the yeomanry of our province. What the agricultural wealth of the Dominion is we have no means of ascertaining, but that it will in the next ten years exceed the highest expectations of many we may reasonably hope from the improvement in every branch of agriculture, and the extended cultivation of the virgin soil in hundreds of thousands of acres. I must add in fair play that no little credit is due to the FARMER'S ADVOCATE for the great improvement in agriculture, and also for protecting our cattle from the distempers that are so fatal in the neighboring country.

FARMER, Hull.

Three communications have been received this month which we cannot attend to, because the parties have not sent their names—one from Cobourg signed "R. T.," one from "W. M.," Nanticoke, and one from Copetown signed "Boss Granger." It is not necessary that your names should appear, but it is necessary that we should have them in the office. Some of the communications would appear this month if the names had accompanied the manuscript.

Preventing Fence Posts Rotting in the Ground.

In reply to "Inquirer," the following brief item from the N. Y. Tribune answers his question:—Fence posts ought to be thoroughly seasoned to begin with, after which an application of coal or gas tar will be found good for that portion which is to be under ground and crude petroleum for the part above ground. A good preparation is to soak the posts with petroleum and then hold it by an exterior coat of coal tar on the end to be set in the ground, which many correspondents say should be the top, as posts set with the top down last longer than those set with the butt end down. Salt is also an excellent preservative of timber from dry rot. Wooden piles driven into salt marshes are said to endure much longer than those driven into fresh-water mud. In some countries the custom prevails of soaking logs in the sea previous to sawing them, with a view to render the wood more durable.

The North-West.

SIR,—I am pleased to see that your very interesting paper, the ADVOCATE, is not merely a sectional affair, but embraces the whole Dominion, and has its correspondents in every province. Your items concerning the agricultural prospects and produce in the immense region of Canada are useful and interesting. Your letters and reports from Manitoba are of great interest to others, as well as those who are thinking of emigrating to the province. At this part, Northern Ontario is almost as unknown land. Would you kindly give place to enclosed, abridged from an article written by Mr. Bell, who has explored much of the country:—"Many persons will be surprised to learn that there is actually fertile soil in this North-western district of Ontario. Following the canoe route from Michipicottin to Moose Factory, the country is more or less rocky as far as Missinaibi Lake; yet even in this section the proportion of rock surface to the whole acre may be comparatively small. But after passing the swampy grounds north of Missinaibi Lake the traveller cannot fail to be struck by the abundance and the general fertility of the soil exposed on the banks of the Missinaibi and Moose River. All the way to Moose Factory it consists mostly of a brownish and somewhat gravelly loam or earth, resting upon silt and sometimes upon stratified clays or the solid rock—which, however, is seldom seen except at the principal rapids and falls. But in the central third of the section between Lake Superior and James' Bay, or from the Brunswick to the Long Portage, a light-colored clay usually forms the surface. I examined the country for a mile or two back from the river in several places for the special purpose of ascertaining the nature of the soil, and found it excellent in all cases, but tending to become more swampy in receding from the river. In the Devonian region below Long Portage samples of the soil were collected in a few places for subsequent examination. In traversing such a good extent of almost unbroken wilderness one is apt to forget the possible value of this vast region for agricultural purposes, but the examples of the farms at New Brunswick House and Moose Factory show upon a small scale what might be extended over a great part of the country. I have no doubt that at some future time this territory will support a large population."

A. R.

SIR,—I am quite pleased with the way in which you are trying to reform abuses in our Provincial Board of Agriculture, and not only there, but it is refreshing to read the valuable suggestions thrown out from time to time in your valuable paper—"A Dominion Farmer's Club suggested," &c. I think a great deal of the idea, and hope it will be taken up by some of our leading farmers and thoroughly discussed. They used to tell me you were a "dyed-in-the-wool Tory," and that was the reason you were always running down the Model Farm, but I think you are one of the best Reformers we have, and deserve the thanks of farmers as a class for the unbiased opinions you give on things in general. Your trip to Manitoba was particularly interesting; your English letters are written by one who understands his business, and the way in which the ADVOCATE is conducted is a credit to you and a great boon to the farmers of Canada.

AGRICOLA, Guelph.

Stock in the Maritime Provinces.

SIR,—It is with pleasure we see the interest of the farming community in this country as well as elsewhere responding heartily to the call for improvement. The Governments are laboring with a zeal worthy of the trust and confidence placed in them, and the cry of hard times seems now to almost dwindle into utter insignificance. The marked improvement in the past few years in the stock of this country speaks well for the husbandman. Our dairies are getting more fully developed and good milking families are looked for for this use. Then we have the beef trade with England and other foreign ports, which is causing no small commotion with our larger breeders. "which they have found in the past to be most remunerative." Our Shorthorns, as a rule, have not proved to be good milkers, but if our farmers took the same pains in selecting animals as Mr. Turncliffe, by asking to see the dam when purchasing a bull to breed from, and would not have the animal in his herd after seeing his dam, because she had a badly formed udder, we would ere long meet with much better results. Some of the young here have weighed at eight months old 730 pounds, and this we consider very good. The Jerseys are, all things considered, a good family cow, and better adapted to small homesteads than our larger breeds. In some parts of these provinces you can find stock farms where you can select one of these deer-like beauties, to adorn your lawn or pasture lands, of undoubted pedigree. But the enormous price asked for these animals by breeders is the cause of our poor farmers having to be content to breed from any common animal. We have bred them, but not with success.

Ayrshires are better adapted for our cold climate, and we have found them most beneficial stock to raise. The oxen are larger than Jerseys, and make better animals for work, although in Nova Scotia some say the Devon is the best, and prefer them as workers. They claim them to be very tough and of great endurance. A. I. K., Fredericton, N.B.

DEAR SIR,—I noticed an article in the November number of your paper on underdraining, under the head of "Farming for Pleasure and Profit." Now, as I am desirous of underdraining my orchard, it would greatly oblige me, and perhaps others, if some of your correspondents would give their plan of making underdrains. My idea of draining was this: Plough two furrows as deeply as possible, throwing these out both ways; then draw another furrow in the bottom of these, then cut out the bottom of this with the spade, and fill in the bottom with broken stones, say four or five inches deep, cover with rye straw and fill in the dirt. Will my plan answer the purpose?

I also notice an article on "Worms in Horses," by "A Working Farmer." I have a horse which has been troubled with small, white worms, from one to two inches long, for two or three years. Are they the same kind as he speaks of? If not, is there any remedy? The horse keeps thin in flesh, and rough. N. T., St. Catharines.

[They are not the same kind as mentioned by "A Working Farmer," but the same treatment, with the addition of a dose of one drachm each of sulphate of iron and gentian, given in malt or boiled barley, every second night, would soon put your horse to rights.]

SIR,—In your March number of the ADVOCATE you make some statements respecting the market fees in the city of Ottawa, in which you say that you heard of one man who paid \$3.60 market fees, and you give a picture of a man with a one-horse sleigh, as though a man with such a load as represented had to pay \$3.60. I was lately talking with a man who contended that such a thing was not possible, and that you only meant to draw a caricature. Now, what I want to know is, is the thing really true? and, if so, are the farmers of Canada going to submit to such imposition?

J. W., Cambray.

[The prices stated in the article were given to us by reliable men; in fact, we saw men pay some of the rates. The words "and tolls" should have been inserted. The \$3.60 included the tolls. We believe our informants were as correct as any doubters. May be the tolls charged on the roads there are incredible to western men that have not been there.]

To J. H., Tilsonburg.—You may safely prune your grape vines now, or any time before the sap begins to flow.

SIR,—Can you tell me any cure for a disease that affects turkeys, chiefly at this season of the year? They stop eating and mope around for a week or more, and then die. I have lost a large number these few years back. On examination, I find the liver enlarged, and filled with tubercles; the rest of the organs seem healthy. My turkeys have a wide run, and I have changed the breed without any effect.
EDITH, Woodstock, N. B.

[Perhaps some of our readers will oblige by answering this enquiry, as we have never had any affected in this manner.]

SIR,—Please inform me as to the name, habits, &c., of the enclosed worm. It was found alive in a tin boiler, in which rain-water had accumulated from the house roof; the water had been in the boiler some time. By informing me as to how it originated, &c., you will much oblige.
D. F.

[The worm is the hair-worm (Gordius). In their larva state they inhabit the bodies of beetles, grasshoppers and other insects; when full grown they leave the bodies of the insects to deposit their eggs in water or moist earth. They have been popularly believed to be hairs transformed to worms.]

Chicago Fat Stock Fair.

The exhibition of fat cattle at Chicago must be of interest to stock breeders and farmers generally, as showing the gain in weight of Shorthorn steers, in fattening per day and for a given period. The age and gain in weight of the Shorthorn prize-takers is annexed. That stock feeding is not a losing or unprofitable business was demonstrated at the fat stock fair.

SHORTHORN STEERS—3 to 4 YEARS.			
Exhibitor.	Age in Days.	Weight Nov. 10, 1879.	Average Gain per Day Since Birth.
John Sherman	1,311	2,019	1.53
J. H. Graves	1,335	2,060	1.54
Average	1,326	2,030	1.53½
SHORTHORN STEERS—2 to 3 YEARS.			
Exhibitor.	Age in Days.	Weight Nov. 10, 1879.	Average Gain per Day Since Birth.
J. N. Brown's Sons	845	1,636	1.93
J. N. Brown's Sons	814	1,449	1.73
A. F. Moore	963	1,786	1.87
Average	871	1,624	1.86

The Tent Caterpillar.

We now come to the tent caterpillar, which is the larva of a yellowish-brown miller. The eggs are deposited in rings, each ring containing from three to five hundred eggs, and encircling the smaller branches usually within a few inches of the extremity. They remain through the winter, and are protected by a kind of waterproof varnish. They hatch in the spring, and each ring of eggs makes a nest of caterpillars. The worms which hatch out as soon as the leaf buds open, are at this time very small, not thicker than a cambric needle, but they continue to increase in size for several weeks until they become about two inches long and a fourth of an inch in diameter. They then pass to the pupa state, and in the latter part of summer they come out as a yellowish-brown miller, lay eggs and die.

A disease, somewhat resembling Texas fever, is reported in some of the dairies near St. Louis, proving fatal in a number of cases. It is said the extraordinary drought has dried up or rendered stagnant, ponds in which the cattle have been in the habit of drinking, but that late rains have somewhat improved their condition.

A good Jersey cow, during ten years of usefulness, will produce skim milk enough to pay for her keep, and 3,000 pounds of the best butter in the world into the bargain—butter worth several times as much as the heaviest beef animal.

Paris has 82,200 trees in its streets, 8,298 in its public parks and gardens, and 10,390 in its cemeteries. This is from a recent inventory given in the October number of the London Journal of Forestry.

Prizes.

We do not give prizes for sending in the names of old subscribers. We give them what they want, namely, an independent paper—that is, not depending for our existence on political pap, pet jobs, contracts and offices, &c., &c., nor depending on any sect, class or private association. We give our readers full value for their money, and when they receive goods for less than cost they may depend that the cost is exacted from them in some other form. No man or party of men can continually expend money without an equivalent receipt. Pay honestly and fairly for what you get, and look cautiously on all orders, in whatever form they may be presented to you. Therefore, our subscribers that have taken the ADVOCATE for one year know the value of it, and this year, we are sure, they will do as they have done for the past fourteen years—send their subscription direct to this office themselves. They require no agent to persuade, induce, or handle their money, or take a commission out of it.

The ADVOCATE is said by subscribers to be a gem—it gives light to all; its benefits reach all—and of more value to them than diamonds or pearls. That is why they willingly send the dollar bills so freely, more particularly its direct supporters. We well know that every honorable and honest man knows this who has taken the ADVOCATE for one year, and we know that their support is sure.

Our great desire and aim is to place the ADVOCATE for one year in the hands of good families that have not yet taken it; therefore we are willing to submit to a loss on the first year's subscription. Get them to read it for one year; then they will be willing—yes, even glad—to renew their subscription themselves, and find, as another subscriber says, that the \$1 expended for the ADVOCATE is the best-spent dollar that leaves his farm.

Improved Farming Needed.

The subjoined extract from the Country Gentleman, although written for the farmers of the U. S., is worthy of our serious attention. We too need to improve our farming, and although our average is nearly fifty per cent. higher than that over the borders, we fall far short of England in this respect. We have the advantage of them in our exemption from a too great humidity of climate, and in a less exhausted soil, but their cultivation is far superior to any known on this continent.

It is to be hoped that returning prosperity will not lessen the care for the true economy, which, rightly understood, means making the most and best of everything. It is this habit which is the basis of thrift, sometimes by saving what would otherwise be wasted, sometimes by increased expenses, leading to increased production and greater profits. We need a great deal of this latter kind of economy. The resources of this country are not half developed as they should be. I do not speak now of the millions of acres of untilled land at the far west. Some of it is so far beyond the reach of civilization that it can only be cropped by selling everything without regard to keeping up the fertility of the soil. Better leave such land until the time comes when it can be farmed as land should be. But there are millions of acres near good markets in Eastern and Middle States which need manure and under-draining to be farmed as they should be. Upon these lands the effect of higher prices should be seen in an improved system of farming and increased production per acre. Our advantages of cheaper lands will not enable American farmers to grow wheat at an average of 11 bushels per acre, and send it across the ocean to compete with the English farmer who averages 29 bushels. The first thing which increased prosperity should do for American farmers is to make their farms more fertile. Until this is done, it is not certain that American farms, considering disadvantages of location, are so much cheaper than those of England.

Trade with Brazil.

We have had several enquiries as to the kinds of merchandise which can be brought from Brazil to Canada, or taken thither from our ports. The principal articles of export from Dom Pedro's kingdom are: coffee, sugar, cocoa, hides, horns, tobacco and india rubber. Brazil has unlimited quantities of metals, gems of almost all kinds, and forests of woods such as rosewood and mehogany. The half dozen articles first-named are products the most of which we might well use. Then among the commodities which Brazil purchases, prominent are codfish from Newfoundland, cotton and woollen fabrics from England, wrought and unwrought iron from various countries. The United States send thither agricultural implements, hardware, lard, flour, pine, timber, petroleum, biscuits, coal, ice, hams, soap, boots and shoes. Out of this list of articles there are few in which we ought not to be able to compete with Uncle Sam. With a subsidy of \$50,000 from the Government of both countries, a line of steamers ought to be able to open up an important and expanding trade from Halifax or Quebec. The subject is one deserving, and we believe already receiving, the attention of our Boards of Trade and our business men. Mr. Bentley, a gentleman connected, we understand, with the British consulate at Rio, is now in Canada, endeavoring to arrange for mail and freight facilities between the two countries. His project, we understand, takes the present form of a line of steamers connecting Britain, Halifax and Brazil, marked "via New York," are now despatched by the monthly steamers from that city, instead of being indiscriminately mailed to England, and thence to Brazilian ports, as was the case last month.—[Monetary Times.

Rest as a Medicine.

The benefits of rest in aiding the healing process in diseases might be exemplified in a hundred different ways. Indeed, the disease itself is often merely the result of disobedience, often wilful, of the great natural and universal law which ordains that a period of rest must in every case be sequel to one of activity. In the vegetable, as well as in the animal kingdom, this law holds good. Trees and shrubs go to sleep in winter; flowers are generally more tender in their constitutions, and go to rest during the night; while others, again, find it necessary to take a nap, so to speak, during certain hours of the day, and this they do with such regularity that one can pretty correctly tell the time from the opening or closing of their petals. I always look upon a tree as a thing not only of life—that we all know it is—but a thing of feeling. Those lordly poplars, yonder, for instance, now gently waving their tall arms and their wealth of quivering leaves to and fro in the sunlight, have neither thought nor voluntary motion, but a pleasant sensation of warmth I have not the slightest doubt they possess. If I lop a branch from one of them, pain it cannot feel, but probably what might be called a vegetable equivalent to pain, a sense of cold on the surface that has been laid bare by the knife. My poplar trees have been very active during the summer; they are already showing signs of fatigue; by-and-by their leaves will drop in showers, but though bared of foliage they will not feel the winter's cold—they will all be sound asleep.

Many people suffer from chronic indigestion, from the mere fact that having first and foremost produced the dyspepsia by over-loading the stomach, or by other errors in diet, they give it no rest, they keep on worrying it to get well; the very medicines they keep pouring into it keep up the irritation in probably five cases out of ten. In these cases I am convinced that two or three hours complete rest to the stomach every day from both meat and medicine would soon induce a healthy hunger. Those who have this organ in good working order would do well to remember that the time when every particle of food has left the stomach is not the time to put more in. An hour's rest, at least, is needed, and if you give it this before each meal it will be a willing servant, and will never think of suggesting the propriety of a sherry and bitters before you sit down to dinner; and remember a willing servant makes a glad master, and a good-tempered one to boot.—[Cassell's Magazine.

Buckwheat flour is recommended for giving the hair of horses a fine, smooth, brilliant appearance.

Late cut rowen soaked in warm water, and then sprinkled with corn meal, makes good winter food for geese.

Commercial.

London Markets.

London, Dec. 2, 1879.

GRAIN.		Per 100 lbs	
Deihl Wheat.....	\$2 00 to 2 07	White wheat.....	1 85 to 1 90
Treadwell.....	2 00 to 2 07	Barley.....	1 00 to 1 25
Clawson.....	2 00 to 2 07	Peas.....	90 to 1 00
Red.....	1 95 to 2 06	Oats.....	1 60 to 1 03
Spring.....	1 55 to 1 90	Corn.....	91 to 1 00
Rye.....	75 to 80
Clover—Only one lot has as yet offered; it brought \$4.50.			
FLOUR.			
Flour, fall wht.	3 25 to 3 40	Oatmeal.....	2 50 to 3 00
“ mixed..	2 75 to 3 03	Cornmeal.....	1 75 to 2 00
“ spring..	2 75 to 3 01	Graham.....	2 75 to 3 00
LIVE STOCK.			
Per 100 lbs		Per 100 lbs	
Cows.....	25 00 to 40 00	Live hogs.....	3 00 to 4 00
HAY AND STRAW.			
Hay, per ton...	6 00 to 10 00	Straw, per load...	2 60 to 3 00
POULTRY.			
Chickens.....	35 to 40	Turkeys.....	60 to 1 25
Geese.....	40 to 50	Ducks, pair.....	40 to 60
PRODUCE.			
Butter, crock.....	17 to 22	Cheese, lb.....	11 to 12½
do roll.....	20 to 26	Eggs, per doz.....	20 to 22
do Firkins.....	16 to 18	Potatoes, bag.....	50 to 60
do inferior.....	8 to 10	Apples.....	30 to 60
Carrots, per bu.....	25 to 30	Turnips, per bu.....	20 to 20
Onions, bush.....	80 to 1 00	Cordwood.....	3 25 to 3 75
Beef, 100 lbs.....	3 00 to 5 00	Mutton, lb.....	5 to 6
Dressed hogs.....	5 00 to 5 25	Lamb.....	7 to 8

Toronto Market.

Toronto, Dec. 2.

Wheat—Fall, \$1 25 to \$1 30; spring, \$1 25 to \$1 26. Barley—No. 1, 72c. to 73c.; No. 2, 64c. to 65c.; No. 3, 48c. to 60c. Peas, 64c. to 66c. Oats, 35c. to 37c. Corn, 57c. to 58c. Flour, \$4 60 to \$5 40. Hogs, \$5 25 to \$5 51. Butter, 12c. to 20c. Wool, 26c. to 27c.

Montreal Market.

Montreal, Dec. 2.

Flour, \$5 00 to \$6 30. Wheat—Canada spring, \$1 32; winter, \$1 37 to \$1 39. Oatmeal, per 200 lbs, \$4 60 to \$4 65; cornmeal, per 100 lbs, \$2 95 to \$3 00. Corn, per 56 lbs, 55c. to 56c. in bond. Peas, per 66 lbs, 57c. to 76c. Oats, per 32 lbs, 26c. to 29c. Barley, per 48 lbs, 60c. to 70c. Butter, western, 19c. to 22c.; eastern townships, 22c. to 26c. Creameries, 27c. to 30c. Cheese, 12c. to 13c.

New York Markets.

New York, Dec. 2.—Wheat slightly in buyers favor. Receipts, 350,000 bushels; sales, 40,000 bushels. No. 2 red at \$1 47½. Rye, State and Canada, 91c. Corn, 50c. to 60½c. Oats, 45c. to 47c. Pork, \$11 75.

Chicago Markets.

Chicago, Dec. 2.—Wheat, \$1 21½ to \$1 23. Corn, 39½c. Oats, 34c. Pork, \$12 50. Rye and barley steady and unchanged.

The supply of the English market has been unprecedented and fully equal to the demand. To this must be attributed the fact that, notwithstanding the great deficiency in the English and continental crops, prices have not advanced higher than they have been. The immense quantities at the seaboard have had, throughout the season, a great effect upon the markets of Britain by which prices here are ruled.

Telegraph, of 1st inst., reports as follows:—
London, Dec. 1.—Floating cargoes of wheat at the opening firm. Corn a turn dearer. Cargoes on passage and for shipment—Wheat at opening quiet but steady. Mark Lane—Wheat at the opening firm; corn a turn dearer. London—Quotations of fair average quality No 2 Chicago spring wheat, for shipment during the present and following month, per sail to Queenstown for orders, per 480 lbs. Am. terms, 53s. Good cargoes red winter wheat, off the coast, per 480 lbs., sea damage, for sellers' account less usual 2½ p. c. commission, 55s. 3d. Cal. wheat, off the coast, per quarter of 500 lbs., 56s. Good cargoes mixed American corn, off the coast, per 480 lbs., t. q. less usual 2½ p. c. commission, 25s. 3d. English country markets quiet; French steady. Farmers' deliveries of wheat during the week—35,000 to 40,000 qrs.

Liverpool Market.

Liverpool, Nov. 29.

Flour, p. c., 10s 6d to 13s. Wheat—Spring, 10s to 10s 1d; red winter, 10s 1d to 11s 4d; white, 10s 7d to 11s 6d; club, 11s 6d to 11s 10d. Corn, 6s 8d. Oats, 5s 8d to 6s 8d. Barley, 6s 3d. Peas, 7s. Pork, 56s. Beef, 83s. Cheese, 64s.

Live Stock Market.

Montreal, Dec. 1.—The supply of cattle at both the St. Gabriel and Viger markets to-day was very large, but the demand was not extensive. The best quality was exhibited at St. Gabriel's market, being exclusively Western Ontario cattle. Prices ranged from 2c. to 4c. per lb., live weight, whilst hogs sold at from \$4 50 to \$5 per cwt. At Viger market the quality of cattle was far from good, and low prices were the rule, a great many small cattle changing hands at 2c. per lb., live weight. The range was from 2c. to 4½c., but the rule was 2c. to 3c. Sheep and lambs were in request, the former selling at from \$4 to \$5, and the latter from \$2 to \$3.

CHICAGO HOG MARKET.

Chicago, Dec. 1.—Hogs—Receipts, Saturday, 38,000 head; light at \$3 80 to \$4; heavy at \$4 20 to \$4 40.

Stock Notes.

Messrs. Jardine & Sons recently sold, while in London, the first prize Toronto heifer to Mr. John Cochrane, of Seaforth; also bull calf to Mr. E. Caswell, of Ingersoll; sold bull at Ottawa to J. L. Gibb, of Compton, P. E. I., and bull to Thomas Guy, of Oshawa. They have also completed a sale, to a gentleman in New York State, of heifers amounting to \$300.

Mr. G. Hood, of Guelph, exhibited some of his stock at the Fat Stock Exhibition at Chicago, and carried off nearly every first prize offered. He was nearly as successful with his exhibit in the medium class. He also carried off the Sweepstakes for the best wether.

Capt. Kidd, of Kentucky, held a three days' sale of Shorthorns in the early part of November. 250 head were sold; the average price received was \$57.

To Subscribers.

Can you spend a few moments better than attempting to induce a neighbor to expend one dollar for the ADVOCATE? Would you not be doing good to him, to his family, and to the country? Is there any cheaper, more pleasing, interesting, or useful educator than the FARMER'S ADVOCATE?

We hope that our friends will speak a few words at the proper time, and where they do not succeed, if they know the party should take the ADVOCATE and does not or will not, kindly send us the reasons why.

The Peasant Farmer in France.

His usual meal consists of dry bread and potatoes, washed down with a little weak wine or coffee. Twice in the week he may, perhaps, have a slice of bacon. On his land he seldom has cereals, but he grows vegetables and raises poultry and pigs. Sometimes he has a cow. His land is generally fully mortgaged, and when he has scraped together enough money to buy another mortgaged acre or two he purchases them. Every feeling, every thought and every aspiration is absorbed in the one passion of saving. His sons and his daughters, until they marry, live in the cottage and out of their weekly earnings pay for their keep. When he and his wife are too old to work he bargains for his and her board with one of his married sons. When he dies his property is divided. But usually one of the sons takes the land and the cottage and makes an arrangement by which the proprietary rights of the others are bought out. On the whole it would seem that the French peasant proprietor is scarcely better off than the agricultural laborer of other European countries; both live alike, poorly and penuriously. The sole advantage of the system is that it encourages thrift and hinders pauperism.

PROSPERING.—We are pleased to hear that our old friend Jones, of the London Commercial College, is doing remarkably well these hard times. The plan of supplying board for his students in connection with the required instruction and giving universal satisfaction. Our farmers' sons should all spend at least one or two quarters at this practical Business Training School. It would cost them only about the ordinary price for board during the same period, and the knowledge imparted in the course of study is quite as essential for the farmers as for any other class in the community, as it fits them for properly attending to their own business, instead of leaving them at the mercy of every sharper that comes along. Money thus invested will pay you excellent interest in the end, and this is one of that kind of expenditures which is never likely to be regretted in the future.

“My dear,” said a gentleman to a young lady to whom he thought to be married, “do you wish to make a fool of me?”—“No,” replied the lady, “Nature has saved me the trouble.”

Our Prizes.

Read the grand list of prizes offered to old subscribers for obtaining one new subscriber. We are sure that you cannot expend a little time better than gaining one or more of the prizes. Every enterprising lady desires to have something better than the indolent or careless; every enterprising gentleman desires to beautify his home and make it pleasing to the ladies; every enterprising farmer desires to have the best grain and roots. There never has been such a grand, useful offer made. Thousands of farmers now say that the ADVOCATE is the most independent and most useful publication in Canada; the ladies and children are pleased and instructed by it. Every person who is desirous of the real prosperity of this Dominion, of the greatest interests in this Dominion, namely, agriculture, and horticulture and education. If any person says one word against this journal, and objects to subscribe, and you knew they should subscribe, you would oblige by kindly informing us of their objections.

These are not offered for sale to the public; they are given for a special purpose, and we have made most favorable arrangements. Our object is to get the FARMER'S ADVOCATE into the hands of more of our farmers once, then they know the value of it and will keep it.

Any new subscriber sending in another name with his own will obtain one of these prizes.

As Regards Eating and Sleeping.

The idea of getting up from the table hungry is unnatural and absurd and hurtful, quite as much so as getting up in the morning before your sleep is out, on the mischievous principle that “early to rise makes a man healthy, wealthy, and wise.” Early rising in civilized society always tends to shorten life. Early rising of itself never did any good. Many a farmer's boy has been made an invalid for life by being made to get up at daylight, before his sleep was out. Many a young girl has been stunted in body and mind and constitution by being made to get up before the system has had its full rest. All who are growing, all who work hard, and all weakly persons, should not get up until they feel as if they would feel more comfortable to get up than to remain in bed; that is the only true measure of sufficiency of rest and sleep. Any one who gets up in the morning feeling as if he “would give anything in the world” to remain in bed a little while longer, does violence to his own nature, and will always suffer from it—not immediately, it may be, but certainly in later years, by the cumulative ill effects of the most unwise practice. In any given case, the person who gets up in the morning before he is fully rested, will lack just that much of the energy requisite for the day's pursuit.

As a people, we do not get enough sleep, we do not get enough rest; we will not take time for such things; hence our nervousness, our instability, our hasty temper, and premature giving out of the stamina of life. Half of us are old at three score, the very time a man ought to be in his mental, moral and physical prime. Half of our wives, especially in the farming districts, die long before their time, because they do not get rest and sleep proportioned to their labor. Nine times out of ten it would be better for all parties if the farmer should get up and light the fires and prepare breakfast for his wife, she coming directly from her toilet to the breakfast table, because it almost always happens that she has to remain up to set things right, long after her husband has gone to bed, when really he has nothing to do after supper but go to bed. This is a monstrously cruel imposition on wives and mothers.—[Hall's Journal of Health.

READING.—It is not the large amount of reading that a person can get through that is beneficial; in fact, a surfeiting is injurious. Many novels and sensational tales are also injurious. The practical information on subjects pertaining to your own business is worth gold to you. This is the very reason that makes the ADVOCATE so highly prized by every real farmer.



The Family Circle.

"Home, Sweet Home."

LUCY WINTON'S TRUST.

A CHRISTMAS STORY.

Lucy Winton had been left an orphan when quite a baby, and lived with her Aunt Hester very happily. She supported herself by taking in various kinds of needlework, and though she had to work very hard for the weekly sum that her earnings amounted to, still her life with Aunt Hester was a very contented one; for she knew, and often thought, with a smile to herself, that she should not have to work so for long: at least, she hoped not.

It was Christmas Eve, and nearly dark. Aunt Hester was out, and would not be home for some hours yet; and Lucy, having finished her work, rose from her chair at the window, and opening the door looked along the street both ways, as far as she could; but with a disappointed air, for she evidently expected some one; she returned to her cosy little parlour.

She was just stirring the fire, though it hardly needed it, it was so bright, when the sound of the little garden gate opening, caught her quick ears, and she ran to the door.

"Oh, Tom!" she cried, seeing a young man when she opened it, "why didn't you come before? I've been all alone ever so long; Aunt Hester won't be in till seven."

She closed the door and led the way to the cheerful little apartment she had just left.

Tom Harding had been paying his attentions to Lucy for some months past, and now they were engaged, with Aunt Hester's full approval.

Tom was a steady and honest-hearted young man; but of course he was not faultless. He possessed one great defect of character, which occasioned kind Aunt Hester much concern, and troubled Lucy besides, would she but have owned it. This was a habit he had of never keeping long in one situation, or to any one thing, however good it was. He was constantly thinking he could do better, and throwing up good employment for what often proved to be no better than that he had.

Many a young man of his acquaintance, with but half his skill as a workman, seemed to get on where he did not; and though he noticed this, he failed to see the cause of his want of success, for he was truly industrious, and never shunted work, he well knew.

Tom was a tall, strong young fellow, and very proud of him Lucy was, as he stood stroking her glossy brown hair—evidently full of thought.

"Tom, dear, has any thing happened to trouble you?" asked Lucy, glancing up into his face.

"Trouble me? Why, what's put that into your wise head, I should like to know?"

"Ah! its no use trying to deceive me, Tom," answered Lucy with an anxious look in her eyes. "Come, tell me what is it."

"Why, what sharp eyes you've got," said Tom fondly; but he looked rather nervous too, and was silent for a short space; then he said, "You see, Lu, I didn't just want to tell you what you've almost found out till after Christmas was past and gone, it'll seem to spoil it like."

Lucy did not interrupt him, but waited patiently for what he was about to tell her.

"Well, Lu, dear," Tom continued, "I haven't been making way of late as I could wish; and I heard of Tom Baker the other day—that young chap that went to Australia some time back. He's getting on at a splendid rate, by all accounts; and he sent a message, advising me to be a sensible fellow, and come out too, and saying that there's plenty of work he could put in my way if I was only there."

"I turned the subject over in my mind for some time, and at last I determined to go. I saw in the

papers that a ship was to sail shortly, and I went and took my passage in her there and then. She starts next Wednesday.

"I didn't tell you before, because I felt that if I did, you might tempt me to alter my mind, and I'm quite sure it's for the best. I'm anxious to have a home to offer you Lucy, and a fair prospect of comfort in it."

Poor Lucy's heart was very heavy. In the first place, the news of Tom's sudden decision was a great shock to her; and then she did not regard the project quite in the same, or in so hopeful a light as he did. She wished with all her heart that he had never thought of going away.

"You don't like the idea of my going, Lucy," he said as she remained silent.

"Of course I don't, Tom," she answered.

"No, I mean apart from my going away from you; you don't think it a good plan."

"No," answered Lucy, "if you will not mind me saying so; I think it would have been better if you had stayed here and gone on steadily with the old work. But you know best, dear; and I can't bear to think of you crossing the sea."

She ended by giving way to uncontrollable tears. But there were no tears on Lucy's face when Aunt Hester came in, a little later on, though she saw that something had occurred to disturb them both, and inquired what it was.

"Ah!" she said, when she had heard about Tom: "a rolling stone, a rolling stone, I fear. Stay in England, if you take my advice, and make the best of what you've got, instead of going so far after what you're not sure of."

Aunt Hester would not let them be dull, though they might have cause to be so. It was Christmas Eve, she said, when it was every one's duty to be cheerful in spite of circumstances; and she bustled about to get the tea ready; after which they all assisted in decking the small parlour with Christmas garniture.

Even in the knowledge of what was to take place the following week, Christmas passed away very peacefully and happily, and the day that was to witness Tom's departure drew on apace.

Lucy tried to keep a good heart, and succeeded very well, till just the last good-bye came to be said, and then she utterly broke down. This need not be wondered at, for Tom was to be absent an indefinite period.

But Tom once gone, she did not sit sorrowing uselessly, but set about her usual tasks with a brave determination to make the best of circumstances, and be the cheerful companion she had always been to Aunt Hester. And the remembrance of the many kind, loving speeches that Tom had spoken to her just at the last, helped her wonderfully to be hopeful and happy.

She *did* wish that Tom was a trifle more settled; but he was so good and steady in other ways, that she hoped he would come to see his failing in a proper light.

How Lucy longed for the first letter from Tom words would be poor to tell.

It came sooner than she expected, bringing news of his safety and progress, and it comforted her greatly. It was so satisfactory that she even began to think perhaps Tom had acted wisely.

He spoke so confidently of his prospects, that she felt fresh heart to work in his absence, and in the intervals between other duties wrought cheerfully at her wedding outfit.

Tom had been away more than a year, when the letters, which had come often and regularly, came no longer, and Lucy grew anxious.

Her cheeks paled, and her eyes became less bright; all her old fears returned, when months went by and still no word arrived from Tom. Several of her young friends told her that Tom had found another to suit his fancy over the sea. "Out of sight, out of mind, you know Lucy," they said. "He would not be the first young man who had acted so."

But Lucy paid little heed to these suggestions; she loved Tom too well to mistrust him so soon; and if he should not return for years to come she would never doubt his truth to her.

On the day that Ellen French and Mary Carver were married, there was a little bitterness to Lucy in the reflection that they had both become engaged after her, and now she was left alone with no knowledge of where Tom was, or when she should see or hear from him, though she felt confident that she should do both, if he lived.

The two young men to whom Ellen and Mary were united had not half the opportunities that had fallen to Tom's lot formerly, and were not such good workmen either, only they applied themselves steadily to the duties of their position, when he would have tried some new thing. Aunt Hester grieved much for Lucy when she marked how she quietly fretted for news of Tom, and saw her face getting paler and thinner.

Once or twice she spoke of him to her niece in rather severe terms; but dearly as Lucy loved and respected her aunt, she would not hear anything said in his disparagement.

It was Christmas Eve again, the third since the one Tom had spent with them. It was a painful time to Lucy now, though she was always outwardly as cheerfully as possible for Aunt Hester's sake, and she took care that all the work should be finished early and put away, and their little home bright and clean, and in holiday trim.

It was a very different Christmas Eve to the one Tom had spent with them; the snow was lying thick on the ground, and it was bitterly cold.

Aunt Hester and Lucy had declined an invitation to dinner on the following day, for Lucy did not care for company, and Aunt Hester always preferred her own home on Christmas day.

So Lucy and she had got in all the necessary provisions, besides the Christmas luxuries, not forgetting the holly and mistletoe, though Tom was not there to admire the taste which Lucy displayed in their arrangement on the walls.

Ten o'clock had struck, and Aunt Hester and Lucy were sitting by the cosy fire having a quiet chat, while Lucy was tacking some clean lace in her dress in readiness to go to church in the morning, when they were startled by a heavy step outside, and a knock at the door. Both went in company to see who it was.

The tall figure of a man stood before them when they opened the door, his coat and hat white with snow.

For an instant only,—perhaps less—Lucy stood regarding him, for the small lamp Aunt Hester held gave but a dim light; then with a glad cry of "Oh Tom?" she ran into his arms.

They were soon seated round the fire in the parlour—the happiest, merriest little party imaginable.

"And now, Tom dear," said Lucy, when she had partly recovered from her joyful surprise, and could find words to question him, "Why have you been so long without writing?"

"So long without writing?" echoed Tom innocently; "why, I've written up to the very last. You see I thought I was coming home a little sooner than I did; I meant to take you by surprise, and did not write by that mail—the only one I missed."

"I haven't had any letters for nearly a year, Tom," said Lucy; "that's why I got so anxious."

Tom looked very grave.

"There must be some reason for that," he said; "I'll find it out."

But he never did discover why the letters never came to Lucy's hand, and it mattered very little now that she knew he had written as regularly as at first.

"Lucy," said Tom, at last, "would you like to know the fortune I've made?"

Lucy smiled with her eyes full of happy tears.

"Yes, Tom," she answered; "but I'm too glad to have you back again to care or think much about that just yet."

"The fact is," said Tom, "I've made no fortune, and nothing like one; but I've saved enough to get a comfortable home with, and shall have some left to put by for a rainy day."

"And do you know, Lucy," he went on very seriously, "I think I found out, when I went away, why I didn't get on as I might have done. I didn't settle to work properly; and now I see my fault I hope I shall alter it. Any one that can't get on here won't do any good going abroad, that's my opinion. I've done nothing while I've been away that I couldn't have done, and done better, had I stayed at home; that is, if I'd applied myself as I did out there. But now I mean to get a good situation in England, and stick to my work, whatever it is, and see what I can do."

"That is just my thought," said Aunt Hester smiling; "you know the good old proverb, 'A rolling stone gathers no moss.' You have been a rolling stone hitherto, though I hope you are one no longer."

You may be sure that Lucy, Tom, and Aunt Hester spent a very happy Christmas, one which they never forgot. There were so much to be thankful for. It was late when they parted for the night. When Lucy reached her room and thought over the joyful event of the evening, and the still more joyful one which she hoped a few more weeks would bring about, she could not feel happy and grateful enough that she had never doubted God's good Providence, and that her love had been strong enough to enable her to trust Tom all along, though she had had many temptations to do otherwise.

THE END.

Indoor Studies.

RESTORATION OF THE OLD FIREPLACE.

"This world is not as bad a world
As some would like to make it;
But whether good or whether bad
Depends on how we take it."

And the "how we take it" depends greatly upon where we stand. To remorseful captives looking out from behind prison bars, to the restless activity of childhood bound to the house by dismal rain, and to the weary invalid lying day after day in a close and darkened room, the walls that shut them in are a burden and a grief. But when the wintry wind sweeps down the valley and over the plain, when it rages through the streets and roars above the forest, when the daylight falls and the snows come down, then the sheltering roof and the glowing fire that bring safety, comfort, and the dear companionships of home seem the chief of all blessings; then the kingdom of heaven is indoors.

Perhaps that paragraph should have been introduced by a "whereas," making it a preamble to this "therefore resolved" that since we are compelled to spend a large part of our time within doors, owing to the demands of social life, to the inclement proclivities of most civilized climates, and to the advances of modern science, whereby the number of invalids is constantly increasing, our home interiors should be made as delightful as possible.

If we could only begin at the beginning, it would be easy in these days of universal art to make them beautiful from top to toe; but here is a stubborn fact: the houses are already in existence, many of them, alas! were built in the days of pagan darkness as to the household art. We can't afford to tear them down or burn them up, poor things, because they are ugly, and I confess that my heart goes out to them with tender longing. I can't bear to think that any sort of misery or ill is irretrievable. Every old—I mean anything already built, no matter what date it bears—and ugly house has its own bitterness, and some of them must remain bitter to the end; yet there are certain defects and shortcomings so prevalent that a prescription for one will apply to a multitude.

But a formal systematic approach is out of the question; I must jump at once into the midst of things and catch the first point that presents itself.

What a dreadful thing it is to see a fireplace bricked up—I mean filled up, stopped up, turned into a dead solid wall, with paper pasted over the ruins, and a round hole in the centre to accommodate an air-tight stove! If this isn't despising one's privileges, privileges never are despised. I should be afraid to tell how many such murdered fireplaces I have seen in houses built before false economy and foolish fashion had exiled the open fires. I always fancy these wicked walls conceal a crumbling skeleton, and I'm certain they are not guiltless of heavy crimes and afflictions, although their agency may not be clearly seen.

This is what I should do if I found such a fireplace in an old house of mine: First, tear away the skeleton hiding wall, and clear out the fireplace and the flue above it, treating the poor chimney swallows as tenderly as possible. Scrape or burn off the accumulated soot, and if the opening was no larger than I could afford to keep, dig the mortar out of the joints to the depth of half an inch or more in the back and at the sides, and plaster them over with Portland cement, wetting the brickwork thoroughly before applying the cement. If bricks show on the face of the fireplace these should be treated in the same way, protecting the corners with brass or iron beads, which are made from just such places. Between the brass beads and the woodwork of the mantel paint the cement, black or red, or in any fanciful colors and patterns.

That is the cheap way. Possibly the old cavernous recess will be found to be lined with

soapstone or fire-bricks in good order. In that case nothing need be done but to remove the soot and stains. Then again if the opening is too large, a smaller fire-place may be built within the large one of any degree of elegance, fire-bricks, soapstone, or tiles for lining, and decorated slate or tiles for the face, all of which can be applied to the huge masonry of the old-fashioned farm-house, as well as to the more frail structures of modern times.

By thus treating this feature of the old house, instead of being a troublesome circumstance to be abused and put out of sight, it becomes a pride and a joy that would save ten times its cost, not only in comfort, satisfaction, and other like commodities whose commercial value cannot be estimated, but in the more "practical" way of diminishing by half the need of other furnishing. All the Axminsters, bronzes, and French plate mirrors that can be crammed into a room won't give it half the cheer of a good bright hickory fire.

Even when a room is warmed by a furnace, such a fireplace, whether it contains a fire or not, is invaluable as a means of ventilation and for the possibilities it suggests. Here, at least, we find the way that leads us to comfort, beauty, health, and, rarer than all, to the depth of economy and the height of fashion.—[Land and Home.

Out-of-Door Life in Germany.

German fondness for out-of-door life is well known. But nature, pure and simple, he does not so much affect as nature adorned with restaurant. The most beautiful landscape serves as a point for a public garden, where, with pipe and glass, he can meditate on the beauties of nature. Often his family are with him. The wife has her endless knitting; the children play about, and acquaintances come up to chat. He orders brown bread, cheese or sausage, and beer "all round," and an afternoon so spent is his weekly holiday. With the lower class Sunday is the most popular picnic day, but if you can afford the time in the week it is considered more elegant. Babies seem to live in the open air, and their multitude and plump, nerveless serenity are at once noticeable to a stranger. Mothers and nurses take them out for a long afternoon in the public parks; not a little walk, but a "stay-spell." Long walks, too, are a favorite amusement, and with good roads, restaurants at convenient points along the way, and often a beautiful landscape at the end, they are not without charms, even to a weak-backed American. For the three months I was in Dresden we regularly every Wednesday—the children's holiday—made such an excursion, and my memory is full of charming rural views so presented to me; trips on the Elbe to the Summer house of the king of Saxony, a restaurant being on one side of the royal garden; to Meissen and its porcelain manufactory; walks through pine woods overlooking the river, and always the odd little restaurants, which gave us, besides the beer, glasses of rich milk, plates of fruit and home-made cakes. Everything is arranged to aid the pleasant fashion. Steamers ply up and down the Elbe; street cars take one where steamers fail; and day after day steamers and cars are crowded with families taking holiday. It is a perpetual picnic, without the fuss and form a picnic at home entails. And, however frugal the German may be, he has always the few pence needed for these excursions.—[Good Company.

GOOD DOMESTICS.—We have observed that persons much addicted to complaining of servants and to dismissing them for real or imaginary offences, seldom find their own condition improved by the change. On the part of employers the habit of fault-finding too often but aggravates the evils of neglect or disobedience on the part of domestics, and those will seldom be pleased who show no disposition to be pleased. It is human nature to be seldom amiable when unhappy. There are but few ungenerous, obdurate persons, who will not be more moved and swayed by a pleasant smile and ten words of kindness and encouragement, than by a long lecture on the duty of servants, or whole volleys of censure. It is ever bad policy, as it is unjust, to have a quick eye to faults and to be blind to good actions. And in families, as in states, those govern best who govern little, and rather by invisible influences and the contrivances and circumlocutions of discretion and charity, than by unmasked authority and force. In fine, in the domestic circle, affection must come within the circle of a deep and generous regard. Who can estimate the value of a long-trying and faithful servant?

Early Training of Children.

It will be a great advantage to children if they are early induced to put forth their powers, to resort first to the resources within themselves, and, as far as possible, to obtain their objects by their own exertions. Such an exercise strengthens the faculties, and gradually prepares a child for acting alone; whilst the habit of having everything done for him, of depending upon others for his enjoyment, enervates the mind, and has a tendency to weaken the active powers. The "I can't" with which children are apt to reply to the commands given them is rarely to be admitted. "I can't" is too often brought forward merely as an excuse for indolence, or an apology for disobedience. Our pupils must learn that success depends upon resolute exertion; and that, under certain limitations, it is a truth, that man can do what he chooses to do. This conviction, adopted as a practical principle, will be powerful in its effects, and will materially contribute to improve the capacities and augment the usefulness of any character. Children will act of their own accord with prudence, very much in proportion as we lead them to do so; we must manifest our confidence in them, if we would render them worthy of it. Where can we find a being more helpless, more unable to contrive for himself, to guard against danger, or to escape from it, when it comes upon him, than a child who has been brought up by his mother's or his nurse's side, looking to her for every enjoyment, and feeling his safety to be wholly dependant on her care?

On the other hand, it may excite surprise to observe how much good sense and self-possession children will display when early accustomed to depend upon themselves. This object, like every other connected with education, is not to be attained by great efforts, but gradually, and by gentle measures. We are not to impose upon children that which is beyond their strength or skill; but we may lead them to take pleasure in accomplishing their objects without assistance; to feel a point of honor to pursue them, notwithstanding some difficulties; to extricate themselves, to submit to trouble, and to surmount obstacles.

As it is by the "neglect of beginnings" that bad habits are contracted, we should not overlook even those minor occurrences of life, which early afford opportunities for inculcating a spirit of independence.

It not unfrequently happens that mothers and nurses are pleased by the unqualified dependence of those under their care; and, for self-gratification, encourage the habit at the expense of their children. They strive to retain their influence, and secure a selfish affection by rendering their darlings helpless, and by fostering their babyish habits.

But it is to be remembered that general independence and vigour of character are perfectly compatible with the dependence of affection. This, indeed, is an object of first rate importance, and must necessarily spring out of that tenderest connection—the connection between a mother and her children; it must be the result of those innumerable kindnesses, of that flow of love and sympathy, which an affectionate and judicious mother cannot but uniformly display towards her children. Such a mother has no occasion to nurture the infirmities of her children, that she may strengthen their affection. It is to be desired that children should possess the greatest tenderness towards a mother, an enjoyment and delight in her society, a reverence for her opinions, and submission to her authority, combined with power to act alone, and to pursue their independent objects with vigour and pleasure; for it is necessary to all that they should mingle strength with affection; that they should be manly as well as tender, and be trained to help as well as to be helped.

LITTLE THINGS.—Springs are little things, but they are sources of large streams; a helm is a little thing, but it governs the course of a ship; a bridle-bit is a little thing, but we know its use and power; nails and pegs are little things, but they hold the parts of a large building together; a word, a look, a smile, a frown, are all little things, but powerful for good or evil. Think of this and mind the little things. Pay that little debt; if it is a promise, redeem it; if it is a shilling, hand it over—you know not what important events may hang upon even that small sum. Keep your word sacredly; keep it to the children, for they will mark it sooner than any one else, and the effect will probably be as lasting as life. Mind little things, and you will rarely suffer from want or privation. It is the small expenditures—the five cents for a glass of lager or for a cigar—that swell the yearly accounts. Take care of the dimes, and you will save dollars.

Clean Beds.

It must be a false idea of neatness which demands that beds should be made soon after being vacated. Let it be remembered that more than three-fifths of the solids and liquids taken into the stomach should pass off through the pores of the skin, seven millions in number, and that this escape is the most rapid during the night, while warm in bed. At least one-half of this waste of putrid matter (from twenty to thirty ounces in the night) must become more or less tangled in the bedding, of course, soiling it, and that part of this may become re-absorbed by the skin if it is allowed to come in contact with it on the next night, as it must, if the bedding is not exposed for a few hours to the air and light. We may well imitate the Dutch example of placing such bedding on two chairs near the window, in the sunlight; or in the window, that the best purifier known—the light of the sun—may dissipate their impurities, or neutralize them. At least three hours on the average, is as short exposure as is compatible with neatness. It is also desirable that the air should pass through open doors and windows, and that as much sunlight be admitted as possible to the room in which about one-third of the time is spent. In addition to these measures it is well to have the attic windows wholly or partly open, and the door leading to it, so that a free current may pass through all the rooms, up the stairs, and out into the outer world, to become purified by vegetation, &c., before being again respired.

Clothes thus aired and sunned will not demand more than half the usual washing, though they can scarcely be washed too often.

Another means of promoting personal cleanliness is by an absolute change of all clothing, morning and night, wearing nothing by night that is worn by day; and vice versa. Such clothes as are hung to sun by day and dry by night, and such only are fit to be worn by those who have a reasonable regard for personal cleanliness. And I may remark that when such clothes are removed for the change, it is of the utmost importance to the health that the skin should be subjected to a reasonable friction—as by a flesh-brush, a crash, a coarse flannel, or the hand, as a means of cleanliness, and of improved circulation.

The Result of Getting Mixed.

A young lady gave "her young man" a beautifully worked pair of slippers, and he acknowledged the present by sending her his picture encased in a handsome frame. He wrote a note to send with it, and at the same time replied angrily to an oft-repeated dun for an unpaid for suit of clothes. He gave a boy ten cents to deliver the package and note, giving explicit directions as to the destination of each. It was a boy with a freckled face, and he discharged his errand in a manner that should give him a niche in the temple of fame.

The young lady received a note in her adored one's handwriting, and flew to her room to devour its contents. She opened the missive with eager fingers, and read:—

"I'm getting tired of your everlasting attentions. The suit is about worn out already. It never amounted to much anyway. Please go to thunder."

And the tailor was struck utterly dumb when he opened a parcel and discovered the picture of his delinquent customer, with a note that said,—

"When you gaze upon the features think how much I owe you."

When the unfortunate young man called around that evening to receive the happy acknowledgment of his sweetheart, he was very ostentatiously shoved off the steps and over the fence by the young lady's father, and in the morning he was waited upon by his tailor's lawyer, and imperatively ordered to settle or suffer.

AS GOOD AS HE GAVE.—Facetious Tram-car rider: "What! is the old Noah's Ark full?" Second facetious ditto: "No. Just room for the donkey. Step in!"—[Funny Folks.

The Toronto Graphic says that "A woman may wear her hat knocked into any conceivable shape, and both herself and the hat are pronounced perfectly lovely; but just let a man jam in one side of the hat he wears, and he is at once pronounced a first-class rowdy."

Industrial Art Training for Women.

It is by many looked upon as a sort of natural necessity, and not as merely a national distinction, that the French excel us in most departments of artistic industry. The excellence may lie not in the material, nor in the honesty of workmanship, so much as in form and colour and their attendant graces; but there they are, and we acknowledge the fact. We have among us individuals who are equal in their attainments to any that can be produced by France, but we speak conventionally, and therefore generally. Limiting our observation to ladies, we venture to treat as an idle superstition the belief that English ladies cannot do what French ladies excel in. It is a common observation we are aware, that no English lady has the skill to make or choose even a dress for herself, or the ability to wear it with propriety when she has procured it from Paris. In a similar style we are depreciated in other departments, and allow ourselves to be set aside by all the nations of Europe in turn, until we, poor Englishwomen, have no merit but that of a good complexion and a good conscience.

So be it. Still we do not complain until we are informed that we cannot learn; that in verity the daughters of England have no vocation but to make butter, to feed poultry, and to do sundry other homely tasks, cooking and dressmaking always rigorously excepted. The truth is that we are too meek, and suffer the business of self-satisfied people to carry them to absurd extremes, to make us forget the long roll of our great women, and to lose sight of our personal abilities. A glance at the past of our fellow country-women would reveal to us the wholesome and instructive fact that they have excelled in all the sciences, abstract and natural, in all the arts, and in divers professions and occupations which require intellectual versatility and manual dexterity.

If the Frenchwoman can rehearse a catalogue of illustrious names of ladies famous for their loveliness, their wit, their social prominence and their political influence, we allow her to do so, and content ourselves with a more modest display in those departments. If she goes into the domain of intellect, and marshals her examples in literature, science, and art, we do not shrink from the competition, and can hold our position well and bravely. It is only when she marches at the head of her battalions, and calls us to review her hosts of well-trained and of adequately skilful women occupied in industrial art, that we own ourselves vanquished.

Last week's Builder contained an article headed "Help the Girls," a Free School of Art, in which there was a good account of the national school of design founded in Paris by a French lady in 1802, and still a power for good. We understand that at this moment there are taught gratis, drawing, and all pertaining to it. The foundress's hope was that her proteges would end by obtaining lucrative employment in painting on earthenware, porcelain, paper, fans, engraving on copper and wood, medallions in clay, enamelling, making lace, or artificial flowers—in a word, in the numerous departments which owe their perfection to taste, natural elegance, innate refinement, and the delicate manipulation of the persons who devote themselves to this work.

Similar objects have often been proposed to English young women, to whom providence has granted intellect and a good status in society, but not money. To some extent such work is done and well done; but it must be admitted that, admirable and praiseworthy as our arrangements are now, and successful in their results, more is needed. Modern custom may be blamed; but it cannot be resisted, when it forbids poor gentlefolk to have their daughters trained for dressmakers or to serve behind the counter. The victims of custom cast about for an honourable calling, but sometimes fail to find one which is not thronged with idle candidates.

Here our contemporary comes in, and, while narrating the interesting story of the school already named, recommends the establishment among ourselves of one which, like that, shall be free. It is an excellent idea, and we hope it will receive proper attention, because we are sure there is not only room for many good women workers among us, but a mass of latent talent in our English girlhood which, properly trained, would help to free us from a fashionable reproach.—[The Queen, Foreign.

"Little Scotch Granite."

Did you ever have a bit of cloth that you thought clean until sometime it happened to be laid close by a new piece, and then you saw it to be soiled? In a similar way people discover facts about themselves sometimes, as Burt and Johnnie Lee did when their Scotch cousin came to live with them. They were "pretty good boys," and would have been very angry if anybody had called them deceitful.

Well, when their cousin came they were delighted. He was little, but very bright and full of fun. He could tell curious things about his home in Scotland and his voyage across the ocean. He was as far advanced in his studies as they were; and the first day he went to school they thought him remarkably good. He wasted no time in play when he should have been studying, and he recited finely. At night before the close of school the teacher called a roll, and the boys began to answer "Ten." When Willie understood that he was to say "ten," if he had not whispered during the day, he replied:—

"I have whispered."

"More than once?" asked the teacher.

"Yes sir," answered Willie.

"As many as ten times?"

"May be I have," faltered Willie.

"Then I shall mark you 'zero,' said the teacher sternly, "and that is a great disgrace."

"Why, I did not see you once," said Johnnie that night after school.

"Well, I did," said Willie. "I saw others doing it, and so I asked to borrow a book; and then I lent a slate pencil, and asked a boy for a knife, and did several such things. I supposed it was allowed."

"Oh! we all do it," said Burt, reddening. There isn't any sense in the old rule, and nobody could keep it, nobody does."

"I will, or else I will say I haven't," said Willie. "Do you suppose I would tell ten lies in one heap?"

"O! we don't call them lies," muttered Johnnie. "There wouldn't be a credit among us at night if we were to be so strict."

"What of that, if you told the truth?" laughed Willie bravely.

In a short time the boys all saw how it was with him. He studied very hard, played with all his might in play-time, but, according to his own account he lost more credits than any of the rest. After some weeks the boys answered "nine" and "eight" oftener than they used to, yet the school-room seemed to have grown quieter.

Sometimes when Willie Grant's mark was even lower than usual, the teacher would smile peculiarly, but said no more of "disgrace." Willie never preached at them or told tales, but somehow it made the boys ashamed of themselves, just the seeing that this sturdy, blue-eyed Scotch boy must tell the truth. It was putting the clean cloth by the half-soiled one, you see, and they felt like cheats and "story-tellers." They love him, if they did nick-name him "Scotch Granite," he was so firm about a promise. Well, at the end of the term Willie's name was very low in the credit list. When it was read he had hard work not to cry, for he was very sensitive, and he tried hard to be perfect. But the last thing that day was a speech from the teacher, who told of once seeing a man muffled up in a cloak. He was passing him without a look, when he was told the man was General —, the great hero.

"The signs of his rank were hidden, but the hero was there just the same," said the teacher. "And now, boys, you will see what I mean when I tell you that I want to give a little gold medal to the most faithful boy—the one really the most conscientious and perfect in his department among you. Who shall have it?"

"Little Scotch Granite!" shouted forty boys at once; for the child whose name was so "low" on the credit list had made truth noble in their eyes. —Sabbath School Visitor.

HOW TO CLEAN FURS.—Ermine and miniver can be cleaned with a piece of soft flannel and flour or bran. Rub the fur well against the grain, then dip the flannel into the flour and rub it gently until it is snowy white; shake off the flour and rub it with another piece of flannel until all the flour is removed. By this process the color of the ermine is restored, the linings not being removed.

Minnie May's Department.

MY DEAR NIECES.—Most families endeavor to have a good plum pudding once a year at the merry time of Xmas. As many of you will soon be making them, a few hints will be very acceptable to those who do not succeed in making their pudding to taste just as nice as Mrs.

Plum pudding is always better for being made some time before using, and, up to a certain extent, the longer the time the better the admixture. The reason is, that time gives the various juices and flavors a chance to mingle, amalgamate and blend. Plum pudding, black cake and mince meat are all of the same general character, and belong, as we may say, to the same confectionery family. If properly protected from the air, they will all keep for almost any length of time, and improve with age. Our recipe for pudding is as follows:

CHRISTMAS PUDDING.

2 cups of bread crumbs; 2 cups suet; 4 cups raisins; 4 cups currants; 4 ounces lemon and citron peel, mixed; 2 nutmegs; 4 eggs; 2 wine-glasses of brandy; 2 cups of beer; a little salt; 2 tablespoonfuls of mixed essences; 2 cups of brown sugar; 2 tablespoonfuls of molasses; about three cups of flour, or enough to thicken.

This quantity requires from 12 to 14 hours of constant boiling. One great fault with many rich puddings is insufficient cooking. It is well to partly cook a day or even weeks before they are required, and re-heat by steaming or boiling.

A bright Merry Christmas and Happy New Year, Are words this season we usually hear; With plenty of presents and compliments gay, Showering upon us each new Christmas Day.

Good morning, my children! a happy New Year; I wish you much pleasure, now winter is here; And many sweet bon-bons and presents and food; Of pains be there none—but your appetites good.

Let us sing of this Christmas-time, happy and gay; Would that that every one felt 'twas a bright, joyful day.

Let us pray Heaven to bless the New Year, And make it propitious to every one here.

Dance gaily, dear children, for Christmas has come; A time meant for you, when your brothers are home. Then kisses and bon-bons and costly good sweets; Come, rain on our little ones bountiful treats.

MINNIE MAY.

Answers to Inquirers.

CREWE.—It is very dangerous to tamper moles. They should only be removed by a surgeon.

J. G.—You can clean scarfs and ties with benzine. Use it cautiously, as it is inflammable.

EDWARD.—When an engagement is broken off, all letters and presents should be returned on both sides.

EDWARD B. COPEWELL.—Your description of the "Chamois and the Eagle" was very good, but too late for publication.

GERTRUDE.—There is probably nothing which will promote the growth of the eyebrows. Clipping the eyelashes will make them grow.

FLORENCE.—A lemon sliced with sugar, or honey and sherry, or a raw egg, are excellent remedies to clear the voice.

TOPSY T.—A gentleman must always raise his hat to a lady, and not merely touch it. The latter is a very vulgar action for a gentleman.

SIMPLICITY.—Common curd soap, or Windsor soap, may be beneficially used in winter when the skin is apt to become tender. Flushing after meals generally arises from defective digestion.

A. Y.—When a gentleman has a simple acquaintance with a lady, he should wait to be recognized by her before he bows; but if they be on friendly terms, he may raise his hat at once. The hat should always be raised in salutation.

THE SMOKING OF A LAMP.—Soak the wick in strong vinegar, and dry it well before you use it; it will then burn both sweet and pleasant, and give much satisfaction for the trifling trouble in preparing it.

COCKROACHES.—Take a teacupful of well bruised plaster of Paris, mixed with double the quantity of oatmeal, to which add a little sugar; then strew it on the floor or in the cracks where they frequent, and it will destroy them.

A. S.—You have performed a very wise, modest and meritorious part in concealing the attachment which you have so hopelessly formed. Of course, there is no way of making the young gentleman reciprocate it.

N.—A daily governess should be as well educated as a resident governess. Persons do not usually shake hands when first introduced to each other, unless it be at some very friendly gathering where cold formality is banished.

M. E. R. C.—You were walking with another young lady, and you were met by a gentleman whom she knew, but you did not know him. He bowed; your friend of course acknowledged it; but it was not necessary, not indeed consistent with etiquette, for you to bow also.

FRANK.—Plenty of exercise, regular hours, and temperate living are the best means to give a good healthy complexion and impart brightness to the eyes, if anything will. The amount of income which a man ought to have before he marries depends entirely upon his position in life. You do not tell us yours, and we are therefore unable to advise you on the point.

ANXIOUS.—You say: "I wish some advice, and trust you will be kind enough to answer my foolish question. When lovers quarrel, who should first speak of a reconciliation—the lady or gentleman?" This is not a question of sex. If by "lovers" you mean persons engaged to be married, the offender should act on the scriptural plan and acknowledge the fault. If by lovers you mean people who trifle and flirt without any engagement, the reconciliation is not desirable. That they quarrel is reason enough for keeping apart.

RECIPES.

DEAR MINNIE MAY.—As the merry time of Christmas is fast approaching, I take great pleasure in offering a recipe for Christmas pudding, cakes and mince-meat, all of which are pronounced very good; and if prepared now will be all the better, as age improves both pudding and cake.

AN ENGLISH WOMAN.

CHRISTMAS CAKE.

Requires 9 eggs, 2 lbs. currants, 2 lbs. raisins, 1 lb. butter, ½ lb. citron and lemon peel mixed, half a tea-cup of brandy, 2 nutmegs, 1 lb. brown sugar, 1 tablespoonful molasses; a tablespoonful of mixed essence (which should be almond, vanilla and lemon); add flour enough to stiffen; when all the ingredients are thoroughly mixed, and tins ready and oven at the proper heat, dissolve in a tablespoonful of hot water a piece of ammonia the size of a nutmeg and stir all quickly together.

GOOD MINCE MEAT.

One lb. raisins chopped, 1½ lbs. currants, 1 lb. brown sugar, 2 lbs. apples minced fine, 1 teacup of brandy, 2 nutmegs, 1 teaspoonful of cinnamon and allspice, ½ cup molasses, ¼ lb. lemon and citron peel minced fine, a tablespoonful of mixed essence; ½ lb. lean beef minced fine.

TO BOIL ONIONS.

Some years ago I read in an English journal a contribution of Mr. Frank Buckland, where he stated that after mental fatigue and occasional sleeplessness, he was greatly benefited by eating onions at his dinner. How soporific or sleep-inducing the onion, the much despised vegetable, is, I am not prepared to state, but I know that many persons who are troubled with sleeplessness use them. If properly boiled so as to get the twang out of them, the onion is a most delicate vegetable. To every quart of onions a quart of cold water, with a half tablespoonful of salt. Boil not too fast for two hours. Drain in colander thoroughly and allow to get cold. Make a sauce with a tablespoonful of butter, the same of flour, and one-half pint of milk; rub butter and flour perfectly together, with pinch of black pepper. Boil milk, which pour over flour and butter, and stir all the time to keep smooth. Put onions in sauce and let them heat until the same boils. Ought to be served rather dry.

RECIPE FOR CURING MEAT.

As the season has arrived when curing meat is in order, we republish as of old, our famous recipe for curing beef, pork, mutton, hams, &c., as follows: To one gallon of water take 1½ lbs. of salt, ½ lb. sugar, ½ oz. saltpeter, ½ oz. potash.

In this ratio the pickle can be increased to any quantity desired. Let these be boiled together until all the dirt from the sugar rises to the top and is skimmed off. Then throw it into a tub to cool, and when cold, pour it over your beef or pork. The meat must be well covered with pickle, and should not be put down for at least two days after killing, during which time it should be slightly sprinkled with powdered saltpetre, which removes all the surface-blood, &c., leaving the meat fresh and clean. Some omit boiling the pickle, and find it to answer well, though the operation of boiling purifies the pickle by throwing off the dirt always to be found in salt and sugar. If this recipe is strictly followed, it will require only a single trial to prove its superiority over the common way, or most ways of putting down meat, and will not soon be abandoned for any other. The meat is unsurpassed for sweetness, delicacy and freshness of color.

MACARONI AND PARMESAN.

One quarter pound of macaroni, three ounces grated Parmesan cheese, two ounces butter, one egg, a grain, or as much as will lie on the point of a small knife, of cayenne pepper, a little grated nutmeg, a little common pepper and salt, one pint of milk. Slightly wash, but not soak the macaroni in cold water, place in a saucopan, cover with cold water and boil for fifteen minutes, pour off the water, put in the milk and boil half an hour longer. While this is cooking, beat in a small bowl the egg, to which, when well beaten, add the pepper and salt, the cayenne pepper, the nutmeg, and two ounces of the grated cheese. Then stir in the macaroni and one ounce of the butter; place on a flat dish and sprinkle the remainder of the cheese over the top, add the other ounce of butter in small pieces and put in the oven for ten minutes when it will be lightly browned and ready for use.

TO CURE MUTTON HAMS

Take the hind or fore leg of a sheep, and rub them with the following: Mix two tablespoonfuls of sugar with the same quantity of table salt, and a tablespoonful of saltpetre. Place the hams in separate pans, and rub one with the same quantity. Then twice a day for three days, and rub thoroughly with the hand each time, turning away the liquor which flows through the meat. Then make a new mixture, and turn and rub daily for ten days. At each rubbing take care to leave that side uppermost which was under before. Then smoke the hams like those made from pork, and boil in the same way. Hams prepared in this way will be relished so much that you will always have a good supply of them in the larder.

How Girls are Made Straight.

The Hindoo girls are graceful and exquisitely formed. From their earliest childhood they are accustomed to carry burdens on their heads. The water for family use is always brought by the girls in earthen jars, carefully poised in this way. The exercise is said to strengthen the muscles of the back, while the chest is thrown forward. No crooked backs are seen in Hindostan. Dr. H. Spry says that this exercise of carrying small vessels of water on the head might be advantageously introduced into boarding schools and private families, and that it might entirely supersede the present machinery of dumb-bells, back-boards, skipping ropes, &c. The young ladies ought to be taught to carry the jar as these Hindoo women do, without ever touching it with their hands. The same practice of carrying water leads precisely to the same results in the south of Italy as in India. A Neapolitan female peasant will carry on her head a vessel full of water to the very brim, over a rough road, and not spill a drop of it; and the acquisition of this art or knack gives her the same erect and elastic gait.

"Well, Pat, I think Barney has not acted the friend to you; but you'll forgive him, won't you?"
"Oh, sure entirely, yer honour; an' the first time I have the pleasure of meeting him I'll give him a present of two of the most beautiful black eyes you ever seen."

How to Tell Good Flour.

Here are a few good rules worth remembering, when one has occasion to select flour for family use. Of course the color is of prime importance. If it is white, with a yellowish colored tint, buy it. If it is white, with a bluish coat, or with white specks in it, refuse it. Second, examine its adhesiveness—wet and knead a little of it between your fingers; if it works soft and sticky, it is poor. Third, throw a little lump of dried flour against a smooth surface; if it falls like powder, it is bad. Fourth, squeeze some of the flour tightly in your hand; if it retains the shape given by the pressure, that, too, is a good sign. It is safe to buy flour that will stand all these tests.

Flour is peculiarly sensitive to atmospheric influences, hence it should never be stored in a room with sour liquids, nor where onions or fish are kept, nor any article that taints the air of the room in which it is stored. Any smell perceptible to the sense will be absorbed by flour. Avoid damp cellars or lofts where a free circulation of air cannot be obtained. Keep in a cool, dry, airy room, not exposed to a freezing temperature nor to intense summer, nor to artificial heat for any length of time above 70° to 75° Fahr. It should not come in contact with grain or other substances which are liable to heat. Flour should be sifted and the particles thoroughly disintegrated, and then warmed before baking. This treatment improves the color and baking properties of the dough. The sponge should be prepared for the oven as soon as the yeast has performed its mission, otherwise fermentation sets in and acidity results.—[American Miller.

Cookery as a Fine Art.

Recently Miss Dods, a graduate of the South Kensington School of Cookery, and a reformer in the cooking art, commenced a series of lectures, and practical illustrations of the science in Shaftesbury Hall, Toronto. The course is given by invitation of the leading ladies of the city. The object aimed at is to prove the preparation of food and show how to make the best use of the means within the reach of household managers, whether their resources be many or few. Superior cooking is taught during the afternoon and plain cookery in the evening.

A numerous company of ladies assembled to avail themselves of Miss Dods' knowledge. An unfortunate mistake in the announcement of the hour prevented many more visitors from being present. The programme was, nevertheless, efficiently performed by the lady instructor, who is an adept in the art and imparts her advice in an exceedingly clear and agreeable manner. The bill of fare was as follows:—Windham cutlets, venoise pudding, German sweet sauce, fried fish, and the preparation of stock for clear soup. The operations were conducted on the platform, a gas stove being placed on one side, while the table occupied the central position and was bright with cooking utensils, scales, etc. The teacher deftly handled her materials, exercising great care in the weighing of each ingredient, and won the close attention and pronounced interest of her pupils.

The evening course was devoted to the preparation of dishes suitable to the wants of families of very moderate means. The first culinary effort was an Irish stew, which when finished appeared a delectable dish. While that was simmering on the stove, Miss Dods showed how best to render down mutton and beef fat cooked or uncooked, so as to utilize what is frequently considered absolutely useless. Part of clarified fat was used in the preparation of a subsequent dish. Apple dumplings were next on the programme. These were quickly made, and when cooked looked very tempting. Next came milk rolls, which were prepared with sufficient economy to warrant their general use. As these were a great success, we give the recipe for the benefit of our lady readers.

One lb. flour, 1 oz. butter, 1 oz. sugar, 1 full teaspoonful Cleveland baking powder, 1 pint new milk, and a little salt. First put in the basin the flour, then the butter and half the sugar; rub altogether with the hands till the butter is smooth; then add the salt, next the baking powder, then the milk, a small quantity at a time. Turn it out on the board, and knead quickly together—the quicker it is done the better and lighter it will be. Cut into six or eight parts; shape the dough into long, high pieces; make two cuts across the top; place in a floured tin, and bake in a quick oven for fifteen minutes. When done, take out, glaze over with white of egg, or a little milk, dust the re-

mainder of the sugar over them, and return to the oven for a short time.

While the preceding dishes were in the oven, Miss Dods demonstrated how excellent cheese fritters might be cheaply made. They, indeed, looked very dainty when passed round for inspection. Here is the manner in which this almost novel dish to Canadians was prepared:—

Take 3 oz. or three tablespoonfuls of flour, 1 oz. of butter, 1 gill of tepid water (two parts of cold and one of boiling), a little pepper and salt, one egg, three tablespoonfuls of grated cheese. For this the old hard pieces of cheese may be used. First place in the bowl the flour, then the pepper and salt; melt the butter, and pour it upon the flour. Next, add the water, drop in the yolk of an egg, and then stir in the cheese. Beat the white of the egg to a stiff froth, and when light, mix with the other ingredients. Put in by spoonful into hot lard or clarified fat, and cook for three minutes. When they rise toss them over, so as to brown both sides. When done, take out and place first upon a sheet of white paper, then pile on a hot napkin.

These are but specimens of the recipes so clearly illustrated by Miss Dods. Much can be learned during the hour and a half spent at this class, and the knowledge is imparted so easily and agreeably as to make the study of scientific cookery a pleasant pastime. Fashionable young ladies who contemplate matrimony at a period however remote, will do well to take the course. To working people we can only say that the nominal charge of half a dollar for twelve lessons will be repaid fiftyfold in the improved character of the cooked food provided for the family use. Among the reforms needed in our households not the least is the preparation of our varied supply of animal and vegetable food into nourishing and tasty dishes, instead of tasteless and tough compositions.

Spanish Living and Dying.

The Spanish father is absolute king and lord by his own hearthstone, but his sway is so mild that it is hardly felt. A light word between husband and wife sometimes goes unexplained, and the rift between them widens through life. They cannot be divorced—they will not incur the scandal of a public separation—and so they pass lives of lonely isolation in adjoining apartments, both thinking rather better of each other and of themselves for this devilish persistence. If men are never henpecked except by learned wives, Spain would be the place of all others for timid men to marry in. The girls are bright and vivacious, but they have never crossed even in schoolday excursion the border lines of the ologies. They have an old proverb which coarsely conveys this idea: That "a Christian woman in good society ought not to know anything beyond her cookery book and her missal." An ordinary Spaniard is sick but once in his life, and the old traditions which represent the doctor and death as always hunting in couples still survive in Spain. In all well-to-do families the house of death is always deserted immediately after the funeral, and the stricken ones retire and pass eight days in inviolable seclusion. Children are buried in coffins of a gray color, pink or blue, and carried open to the grave. A luxury of grief consists in shutting up the house where a death has taken place and never suffering it to be opened again. I once saw a beautiful house and wide garden thus abandoned in one of the most fashionable streets of Madrid. The wife of a certain duke had died there many years before. The duke lived in Paris, leading a rattling life, but he would never sell or let that Madrid home. Perhaps in his heart, that battered thoroughfare, there was a silent spot where, through the gloom of dead days, he could catch a glimpse of a white hand, the rustle of a trailing robe, and feel sweeping over him the magic of love's dream, softening his fancy to tender regret.—[Castilian Days.

THE BENEFIT OF BUTTERMILK.—A correspondent of the Country Gentleman says nothing furnishes a more wholesome beverage than buttermilk. "I do not pretend to specify the action of the stomach upon it, in assimilating its properties into the system; but I am satisfied that most persons would be greatly benefited by its constant use. Of course there are some systems that are adverse to it, just as there are to everything. I have used buttermilk constantly for three or four years, and have been entirely free from everything like sick headache, vertigo, foul stomach, etc. Besides, it keeps the appetite in its normal condition,

A Noble Example.

The other day, having need of help from a drayman, we call an Irishman to our assistance. He performed his duty with great promptness, and his language and demeanor generally were such as to command our admiration. Having paid him for his trouble, the following conversation took place: "How long have you been in this city?" we inquired. "Twelve months to-morrow, sir," he politely replied. "Pray, what was your occupation in the old country?" For a moment the man colored and dropped his head, but in an instant after, raising himself with the dignity of a man, he replied: "I was a physician in Dublin." Somewhat surprised, we asked how it was that he was driving a dray. His reply in substance was, that he brought his family direct from Dublin to Chicago; that when he arrived here his funds were so much exhausted that he was unable to maintain the appearance of his profession; besides, he found the city full of young physicians waiting till the city grew. Having no mechanical trade he purchased a horse and dray, and at once began to earn a livelihood for himself and family. We call this a noble specimen of a man.—[Chicago Tribune.

Presence of Mind.

Professor Wilder gives these short rules for action in case of accident. For dust in the eyes, avoid rubbing, dash water into them. Remove cinders, etc., with the round point of a lead pencil. Remove insects from the ear by tepid water; never put a hard instrument into the ear. If an artery is cut, compress above the wound; if a vein is cut, compress below. If choked, get upon all fours and cough. For light burns, dip the part in cold water; if the skin is destroyed, cover with varnish. Smother a fire with carpets, etc.; water will often spread burning oil and increase the danger. Before passing through smoke take a full breath and then stoop low, but if carbon is suspected, walk erect. Suck poison wounds, unless your mouth is sore; enlarge the wounds, or, better, cut out the part without delay. Hold the wounded part as long as can be borne to a hot coal, or end of a cigar. In case of poisoning, excite vomiting by tickling the throat or by water and mustard. For acid poisons give acids; in case of opium poison, give strong coffee and keep moving. If in water, float on the back, with the nose and mouth projecting. For apoplexy, raise the head and body; for fainting, lay the person flat.

Compressed Air.

Unprofessional people frequently hear the term "compressed air," but have not the least conception of its meaning, only vaguely understanding that it is an important link in the daily lengthening chain of progress. Compressed air is ordinary atmospheric air compressed to less space than it commonly occupies, and confined in a receiver. The compression is effected by a cylinder and piston, and when so compressed it is confined in an airtight chamber of great strength. It thus becomes a reservoir of power many times greater in initial pressure than the power which stored it up. Allowed to escape against another piston, it creates power, or rather capable of being employed in many situations where steam cannot. It can be conveyed long distances without material loss. The greatest distance known to us where steam has been carried is one thousand five hundred feet, but safeguards had to be employed to prevent condensation and loss of pressure. Compressed air undergoes no such changes, and there is theoretically no limit to the distance it can be conveyed. It is now used in mining, in driving beasts in tunnels, in submarine operations, and for other purposes.

MODES OF SALUTATION.—The German says, "How do you find yourself?" or, "How goes it?" The Frenchman, "How do you carry yourself?" The Englishman, "How are you?" and the impulsive American, "How d'ye?" A bow is a courtly practice; the lifting of the hand to the hat a military salutation; handshaking prevails in the United States and England, and kissing in France. In Africa demonstrations of delight are made by falling down on the back and kicking up the heels; in America by clapping hands. The Arab, to express his friendship, hugs and kisses his adored, if permitted, and then asks for *backsheesh*; in some tribes they rub noses. The Yankee, when he is puzzled, scratches his head, the Chinaman his foot.

Table Etiquette.

Never eat very fast.
 Never fill the mouth very full.
 Never open your mouth when chewing.
 Never make a noise with the mouth or throat.
 Never attempt to talk with the mouth full.
 Never leave the table with food in the mouth.
 Never soil the table-cloth if it is possible to avoid it.
 Never carry away fruit and confectionery from the table.
 Never encourage a dog or a cat to play with you at the table.
 Never explain at the table why certain foods do not agree with you.
 Never introduce disgusting or unpleasant topics for conversation.
 Never pick your teeth or put your hand in your mouth while eating.
 Never cut bread; always break it, spreading with butter each piece as you eat it.
 Never come to the table in your shirt-sleeves, with dirty hands or disheveled hair.
 Never express a choice for any particular part of a dish, unless requested to do so.
 Never hesitate to take the last piece of bread or the last cake; there are probably more.
 Never call loudly for the waiter, nor attract attention to yourself by boisterous conduct.
 Never hold bones in your fingers while you eat from them. Cut the meat with a knife.
 Never use your own knife when cutting butter. Always use a knife assigned to that purpose.
 Never pare an apple, peach or pear for another at the table without holding it with a fork.
 Never wipe your fingers on the table-cloth nor clean them in your mouth. Use the napkin.
 Never allow butter, soup or other food to remain on your whiskers. Use the napkin frequently.
 Never wear gloves at the table, unless the hands from some special reason are unfit to be seen.
 Never, when serving others, overload the plate nor force upon them delicacies which they decline.
 Never pour sauce over meat and vegetables when helping others. Place it on one side on the plate.
 Never make a display of finding fault with your food. Very quietly have it changed if you want it different.
 Never pass your plate with knife and fork on the same. Remove them and allow them to rest upon a piece of bread.
 Never make a display when removing hair, insects or other disagreeable things from your food. Place them quietly under the edge of your plate.
 Never make an effort to clean your plate or the bones you have been eating from too clean; it looks as if you left off hungry.
 Never tip back in your chair or lounge upon the table; neither assume a position that is awkward or ill-bred.
 Never at one's own table or at a dinner-party elsewhere, leave before the rest have finished without asking to be excused. At a hotel or boarding-house this rule need not be observed.
 Never feel obliged to cut off the kernels with a knife when eating green corn; eaten from the cob, the corn is much the sweetest.
 Never eat so much of any one article as to attract attention, as some people do who eat large quantities of butter, sweet cake, cheese or other articles.
 Never expectorate at the table; also avoid sneezing and coughing. It is better to arise quietly from the table if, you have occasion to do either. A sneeze is prevented by placing the finger firmly upon the upper lip.
 Never spit out bones, cherry pits, grape skins; &c., upon your plate. Quietly press them from your mouth upon the fork, and lay them upon the side of your plate.
 Never allow the conversation at the table to drift into anything but chit-chat; the consideration of deep and abstruse principles will impair digestion.
 Never permit yourself to engage in a heated argument at the table. Neither should you use gestures, nor illustrations made with a knife or fork on the table-cloth.
 Never pass forward to another the dish that has been handed to you, unless requested to do so;

it may have been purposely designed for you, and passing it to another may give him or her what is not wanted.

Never put your feet so far under the table as to touch those of the person on the opposite side; neither should you curl them under nor at the side of your chair.

Never praise extravagantly every dish set before you; neither should you appear indifferent. Any article may have praise.

Care of Canaries.

Mr. G. P. Burnham in his little book, "Our Canaries," says: Canaries in cold weather should be kept in a room where the temperature is even, and where the heat is not over 65 to 70 degrees during the daytime, nor below 45 to 50 degrees in the night. If no fire is kept up during the night, in very severe wintry weather a newspaper should be secured over and around the top and outside of the cage, from bed-time to sunrise, to keep the bird safely comfortable. At no season of the year should it be forgotten that the Canary-bird's cage must never be hung in a place where a cold draught from the window or door can reach or pass through it. In numberless instances this has caused a sudden cold to attack the birds; and asthma or death follows, very frequently, when this cause is unsuspected. Canaries cannot endure a cold draught of air at all.

In winter time give them all the sunlight you can during the day. In summer keep them shaded from the direct rays of the sun. In the frosty season avoid keeping them where it is too hot, in your rooms where the cage hangs, or you will find they get easily "stuffed up" and wheezy in their notes, in consequence of the over-heated air they are forced to breathe near the ceiling.

Canary and rape seed is the best every-day or staple food you can supply them with. Avoid too much hemp seed. A very little of this latter, and not too often. If they get husky in voice prepare a paste, half-and half of very hard boiled grated egg and arrowroot, with a dusting of Cayenne pepper and dry cracker occasionally. Vary this with the seed food, and in the drinking cup place a bit of sulphate of iron, or a dozen drops of paragoric, for three or four days at a time. This will relieve them shortly. Keep the cage clean. Let the birds have the fresh daily bath at all seasons. Feed regularly and avoid the draught of cold air we have mentioned, and they will do well continuously, nineteen times in twenty.

Mexican Life.

Although the Mexicans are a lazy people, and pass hour after hour in complete laziness, they rise early—the gentlemen to take their morning ride, the ladies to go to early mass, which is the only occasion on which they appear in the streets on foot. They take a luncheon between twelve and one o'clock. Mexican men are, as a rule, temperate; but gambling is their passion, and they are not particularly honest. They are, however, companionable and hospitable; and, though frugal in their way of living, provide bountifully when they entertain. At dinner there are always two or three covers laid for guests who may chance to come in. In many Mexican houses they have, as a rule, no regular dinner. If they are hungry, they eat some simple dish or drink a cup of chocolate, which is excellent; the coffee, however, although they raise a good quality, is not good—they do not know how to prepare it. At six o'clock they drive out, and from the promenade they go to the opera or theatre, taking their daughters, dressed in their finest, with them. If perchance there is no place of amusement to which they can go, then they remain at home, and amuse themselves with cards and music. The young people make dancing their principal enjoyment. More than half the population of Mexico are Indians, and a curious phase of Mexican domestic life is that their house servants are principally Indian girls, although among the eight million inhabitants there are half a million of negroes. These girls are treated very kindly by their employers, and are skilled in household affairs as well as in the use of the needle.

A lady thought it would look interesting to faint away at a party the other evening. One of the company began bathing her temples and head with rum, when the lady exclaimed—"For Heaven's sake put nothing on that will change the colour of my hair!"

How to Deal with Rats.

A writer in the Scientific American says: We clean our premises of these detestable vermin by making whitewash yellow with coppers and covering the stones and rafters in the cellar with a thick coat of it. In every crevice where a man might tread we put the crystals of the coppers, and scatter the same in the corners of the floor. The result was a perfect stampede of rats and mice. Since that time not a footfall of either rats or mice has been heard about the house. Every spring a coat of the same yellow wash is given to the cellar as a purifier as well as a rat exterminator, and no typhoid, dysentery, or fever attacks the family. Many persons deliberately attract all the rats in the neighborhood by leaving fruits and vegetables uncovered in the cellar, and sometimes even the soap is open for their regalement. Cover up everything eatable in the pantry or cellar, and you will soon starve them out. These precautions, joined to the service of a good cat, will prove as good a rat exterminator as the cat can provide. We never allow rats to be poisoned in our dwelling; they are so liable to die between the wall and produce much annoyance.

Determined to be Honest.

The other day, says a Detroit paper, a man with a gaunt look halted before an eating stand at the Central Market, and, after a long survey of the viands, said to the woman, "I am a poor man, but I'll be honest if I have to be buried in the pauper's field." "What's the matter now?" asked the woman, regarding him with suspicion. "No one saw me pick up a twenty dollar bill here by this stand early this morning, but, as I said before, I'll be honest." "A twenty dollar bill picked up?" she whispered, bringing a bland smile to her face. "I suppose," he continued, "that some one passing along here could have dropped such a bill, but it seems more reasonable that the money was lost by you." "Don't talk quite so loud," she said, as she leaned over the stand. "You are an honest man, and I'll have your name put in the papers, so that all may know it. I'm a hard working widow, and if you hadn't brought back that money it would have gone hard with my poor little children." "If I pick up money by a stand I always give it up," he said, as he sat down on one of the stools. "That's right—that's honest," she whispered. "Draw right up here and have some breakfast." He needed no second invitation. The way he went for cold ham, fried sausage, biscuit and coffee was terrific to the woman. "Yes—I—um—try—to—be honest," he remarked between bites. "That's right. If I found any money belonging to you I'd give it up, you bet. Have another cup of coffee?" "Don't care—fidoo," he said, as he jabbed more ham into his mouth. Even courtships have an ending. The old chap finally began to breathe like a foundered horse, and pretty soon after that he rose from the table. "You are a good man to bring my lost money back," said the woman, as she brushed away the crumbs. "Oh, I'm honest," he replied; "when I find any lost money I always give it up." "Well, I'll take it now, please," she said, as he began to button his overcoat. "Take what?" he asked. "That lost money you found." "I didn't find any. I'll be honest with you, however, if I ever do find any around here?" "You old scamp! Didn't you say you found a twenty dollar bill here?" "No, ma'am. I said that no one saw me pick up such a bill here." "Pay me for them pervisions!" she yelled, clutching at his throat. "I'll be honest with you—I haven't a cent!" he replied, as he held her off. She tried to tip him over into a barrel of charcoal, but he broke loose, and before she recovered from her amazement he was galloping off like a horse.

A WORD TO MOTHERS.—One thing we would like to impress upon the minds of mothers in general, and that is—don't be too ready to say "No" to your little children. Stop and think before you deny a request, whether it is not the very thing that you would like to have done when you were a child, and if reasonable, grant it, even though it is childish. Remember that you can follow out your own tastes and fancies without opposition, in nine cases out of ten, and don't be too hard on the one who comes with a timid "May I do this, mamma?" or "Couldn't you let me have that?" Sometimes the granting involves a little discomfort, it is true—noise, or littered floor, or some other grave derangement of the household rules—yet I say, put yourself in your child's place, and see if you cannot give the permission which will wreath the little faces with smiles and gladden their hearts.

Santa-Claus.

Almost all our little folks have of late years made the acquaintance of the mysterious personage known as Santa-Claus. His annual visits are eagerly watched for and reckoned upon in many a home; though when, whence and how he comes—whether down the chimney, or in the invisible miniature sleigh, with eight tiny reindeer, with which he rattles across the snow—they neither know or care; so that he fills their stockings for them they are satisfied. Santa-Claus in olden times was much honored by boys and girls as the patron saint; wonderful tales are told of his kindnesses, so you see he is an old friend to the young folks. There is a Christmas custom in Germany which is very pleasing. The children make little presents to their parents and to each other, and the parents to the children. For months before Christmas the girls are busy and the boys save up their pocket-money to buy these presents. What the gifts are is kept secret. Then on Xmas eve one of the rooms, into which the parents must not go, is lighted up by the children; a great yew bough is fastened on to the table at a little distance from the wall, and a number of little tapers are fixed on the bough, but not so as to burn it, and colored paper hangs from the twigs. Under this bough the children lay out in order the presents they have for their parents, still concealing what they have for each other. Then the parents are introduced and each presents his gift, and then they bring out the remainder, one by one, from their pockets to offer them to their brothers and sisters and friends.

I have heard of some lucky children who have so many toys they don't know what to do with them. If such children would remember that there are many little ones who would gladly accept the oldest and most battered of toys. Think if you don't know of some such that Santa-Claus has never visited, and do you then be his representative, kindly and unobtrusive as he was, and if possible help to make this a happy Xmas time to them, as your kind friends will, I have no doubt, make for you.

"Nothing so quickly dries a woman's tears as a kiss."—Ex. Do you want to set all the girls to crying.

Affected People.

Amongst the various kinds of "affectations," one of the most truly ridiculous is that of knowledge. Densely ignorant, these people assume to possess the key of all wisdom, and if you will believe them, know everything there is to be known. They are never at a loss. They have read every new book as soon as it appears; they have studied every subject from the rudiments upwards; they have gone through every question perplexing your mind so painfully, and come out at the exact spot where truth is to be found. They would as soon confess to a murder as to any kind of ignorance, and are as insufferable with their affected universalism as the others are with their pretended know-nothingness. It is a rank waste

diploma of superiority;—the affectation of delicacy which cannot bear to hear of disease, suffering, vice, sorrow, and the affectation of that cold, hard, matter-of-fact nature which will talk of death at a ball, of diseases at the dinner table, and of horrors everywhere, then if rebuked, and its charnel-house conversation objected to, says it is human life, and all people ought to know the facts of humanity; these are instances of this vice of affectation known to most of us and disliked by all.

Winter and New Ideas.

Winter, with its long evenings and inclement days, is the farmer's seed time for ideas. How often it is, when the labors of a busy season press, that some good ideas occur, but the daily and

hourly details of farm work prevent one from giving it the thought or research which is necessary for its proper development. The more practical mode of proceeding would be to make a minute of such ideas, and at such leisure as usually occurs during winter, develop them, and inform one's self thoroughly thereon. Such leisure affords opportunity for enriching the mind from books, study, and contact with other practical minds. When thus comparatively free from pressing cares, the mind is in a more fit state for profitable development of thought germs gathered during a season of busy labor. To the best accomplishment of this end, all farmers should provide a variety of mind food, agricultural, scientific and literary, especially the first. The great aid in practical life the farmer may obtain from agricultural literature, is beyond computing. He finds in the diversity of views and practices, many which fit his case, or with some modification may be just what, put into practice, will be of great benefit to him, and just what he is seeking for. This diversity of farm ideas among practical men arises from the occupation of diverse soils with varying circumstances, but when closely studied the same underlying principles are common everywhere—the same elements



of time to talk to them, for they only muddle the brains of the unlearned and irritate the temper of the knowing.

The affectation of excessive timidity which screams at slight causes, and flings itself helplessly on the manly protection nearest at hand if only a spider or an earwig comes into view; and the affectation of unnatural courage which boasts itself not to be daunted by anything in the world or out of it, and says it never knew the sensation of fear;—the affectation of extreme sensitiveness, which takes the Eolian harp for its favorite emblem, and is as responsive to every wind that blows; and the affectation of neither-millstone denseness which ridicules nerves, impressionability, everything that the over-sensitive flourish before your eyes as their

enter into all successses, however differently they may be compounded.

"What is that dog barking at?" asked a fop, whose boots were more polished than his ideas. "Jolly," said the bystander; "he sees another puppy in your boots."

A little boy running along, tripped, and fell on the pavement. "Never mind, my little fellow," said a bystander; "you won't feel the pain to-morrow." "Then," answered the little boy "I won't cry to-morrow."

A man calls his mother-in-law Kind Words because she will never die.

Nucle Tom's Department.

MY DEAR NEPHEWS AND NIECES,—Christmas time is again fast approaching, the most joyous time of the year, when friends and families meet around the happy home circles, and faces beam with smiles around the cheerful fireside. What is to be done to amuse our friends? is the question invariably asked. Let us store our memories with a catalogue of games and Christmas diversions, and surely we will be able to think of something that will suit the fancy of one and all. There are some games that seem to belong peculiarly to Christmas, and foremost among these is the game of "snap dragon."

"Here he comes with flaming bowl,
Don't he mean to take his toll,
Snip! snap! Dragon.
Take care you don't take too much,
Be not greedy in your clutch,
Snip! snap! Dragon.
With his blue and lapping tongue
Many of you will be stung,
Snip! snap! Dragon.
For he snaps at all that comes,
Snatching at his feast of plums,
Snip! snap! Dragon."

When this game is decided upon a number of raisins are put into a large broad, shallow bowl, and a little brandy or other spirit is poured over the fruit. The lights in the room are then extinguished, the spirit is ignited, and "little folks" in turns plunge their hands through the flames and endeavor to obtain the fruit. Some games, which are rather boisterous in their character, are known to every one and need no description. Amongst these are "Blind Man's Buff," "Pass in the Corner," "Trencher," "The Blind Postman," "Hunt the Slipper," and "The Elements," or "Air, Earth, Fire and Water." "Proverbs," too, is a capital old game; one of the company leaves the room and the rest fix upon a well-known proverb. The guest returns, and asks each person a question, who, in reply, is bound to bring in one word of the proverb in its proper order. The

questioner tries to find out from these answers what the proverb is. Every one knows the excellent game of "Musical Chairs." There is a variety of it called "The Huntsman." This can be played by any number above four. One of the players is the huntsman, the others are named after the different parts of his dress, thus, the hat, coat, boots, shot, powder, powder-flask, dog, bag, game, etc. Chairs, as many as there are players, excluding the huntsman, are placed in two rows back to back. When all are ready the huntsman walks or runs slowly around the sitters, and calls his followers by their chosen names, and as each one is called he follows the huntsman. At any stage of the proceeding he is allowed to call out "Bang," and immediately take possession of one of the chairs, leaving his followers to seat themselves as they can. When there is a piano in the room the players march round the chairs to music, and scramble for seats when the music suddenly stops. Of course there is always one chair less than players, and that one must pay a forfeit.

A very peculiar sensation may be experienced by those who endeavor to blow out a candle without

seeing where it is. The candle is lighted and placed upon a table. The player is then blindfolded, and is told to walk three steps to the right, to the left, backwards and forwards, and in each case come back to his position, then turn round twice and blow out the candle. In nine cases out of ten he will blow quite away from where the candle stands.

Perhaps it will be said that these games are not particularly new. The wise man said, "There is nothing new under the sun," and games are not the exception. The same sports which were enjoyed 150 years ago are enjoyed to-day, the only difference is that they are carried on in a more refined fashion.

Let us hope that the Christmas season may retain its influence as well as its games, that it may bind heart to heart, and now, dear nephews and cousins, we wish you all a merry Xmas and happy New Year.

PUZZLES.

104—Whole, I am an article for writing on; change my first letter, and I am to skip; curtail me, and I am a headland; transpose, and I am a step; take away the third letter and transpose, and I am an animal; transpose, and I am a plant.

My whole an invention is
Of very good intent,
Without a ship or boat
Far o'er the sea he went.

107—BURIED CITIES, ETC.

Weber lingered carefully, watched over in a van,
near Dresden; big Hussars riding up and down
near lest the best musician of Prussia might catch
cold. Carl is leaving us. Hantham, said Sally,
you are blind, I am sure, to need to be told that.

108—NUMERICAL CHARADE.

I am composed of twelve letters. My 4, 7, 12,
9 is a company; my 3, 11, 1, 5 is a manner; my 8,
2, 10, 5 is a projection.

109—EASY SQUARE WORD.

1. To get, a space, a quantity to specify.
2. An offspring, (2) slothful, (3) a dish, (4) close.
3. A heathen deity, (2) a hall, (3) an interjection.
4. The rear.

110—PUZZLE.

I ceno dha coymn nda a irdfne, no tbho I tse agrte
osert;
I ntle ym ynemo ot ym ndief, nda okto ish rdwo
rehet orfe;
I edska ym nyem fo ym ednifr, dna gthnou utb
rsdwo I otg,
I stlo ym oenym nad ym deinf, orf ues imh I ludow
otn.
Fi I ahd emoynd nad a ndrief, sa ceno I ahd ebofre,
Di epek ym enoynd dan ym neidrf nad lapy eht
offo on roem.

111—SQUARE WORDS.

- 1st. A festival.
 - 2nd. A celebrated Indian village.
 - 3rd. A celebrated General.
 - 4th. One of the United States.
 - 5th. Part of the head.
 - 6th. Capital of an island in the Atlantic Ocean.
- The initials spell the name of a poet, the initials of a town in Scotland.

- 112—My first is in square but not in round.
My second is in dram but not in pound.
My third is in bulk but not in size.
My fourth is in cards but not in dice.
My fifth is in robbery but not in pillage.
My whole is the name of a Canadian village.

- 113—I am composed of the initials of the names of sixteen celebrated characters, and my whole form the sentence—"Knowledge is power." What were their names?



105—HOW MANY BIRDS' NAMES ARE TO BE FOUND IN THIS PICTURE?

106—CHARADE.

- 1—Across the meadow's turf I speed,
Like arrows flight or lightning's flash,
But harmless, gentle, weak, I make
The lowly turf my dwelling place.
My second is heard in church and street,
No house so poor but me you'll hear.
My third is dreaded, loved and feared;
The cause of many, many a tear.
My whole is found in rugged heath,
A symbol of retirement sweet.
The spring and summer's all I see,
My sole companions bleating sheep.
- 2—While Harry took his walks abroad
A stone at Ted he threw,
Which happening to hit his face,
My first did Harry do.
Ted turned to meet his enemy,
And with an ash stricken green
Belabored Harry dreadfully.
My second there was seen;
My whole is found in bullocks legs,
And good it is I trow,
So if you cannot guess it now
Don't say I do not know.
- 3—That I am myself my first
It's useless to say,
But my last I ne'er shall be
No matter how I try;

Answers to November Puzzles.

- 98 Jack and Gill
Went up the hill
To fetch a pail of water,
Jack fell down
And broke his crown,
And Gill came tumbling after.
- 99 1, Candlestick; 2, Firelock; 3, Agincourt; 4, Kensington; 5, Warehouseman.
- 100 1, Caution, London; 2, Crane, Raven, Avert, Nerve, Chin, Hare, Iris, Ness.
- 101—Learn to labor and to wait.
- 102 Ring-dove, Part-ridge, Guinea, Night-inga's Lyre bird
- 103—Dear, Ear, Dare, Deer, Deed, Deep, Deck.

Names of Those Who Sent Correct Answers to November Puzzles.

J. A. McKinnon, I. Harrison, Robert Blair, Gilbert McIntyre, Mary Jane McFadden, Rhoda G. McKay, Ruth Wood, Mamie Henderson, Chas. A. Dinewell, Lizzie Croik, Jas. Cross, Frank Lemons, Emily Wise, Nora Caswell, John Summers, Mary Farmer, Minnie Frost, Wm. Walters, Ed. Wagner, Ida Bennet, Tom Marshall, Lillie Ingles, Henry McNab, Emma Worthington, Jas. Crouse, Alice Walker, Jennie Murray, Thos. Hardy, John Anderson, Eda McKinnon, Frank Wells, Eva Farnell, Susie Jones, Jas. Cowper, Martin Sheak, Abraham Franks, Norman Allwood, Chester Graham, W. Bullen, Harry J. Bayly, J. K. Scott, Katie Garden, Mono Duett, Edna Burgess, Hattie Scott, Joshua Sutherland, Arthur Babbington, Frank Jones, Etta Carter, Julia Hargerman, Sarah Gilbert, Charles Mortimore, Birtie McArthur, Henry Stephens, Kate Weston, John McIntyre, Abel Fortner, Octavius Kerby, J. A. Evans, M. W. Ferguson.

Credit is due Frank Jones for having answered the greatest number of puzzles correctly.

Tale of a Mule.

You, Nebuchadnezzah, whoa, sah!
Whar is you tryin' to go, sah?
I'd hab you for to know, sah,
I's a holdin' ob de lines.
You better stop dat prancin';
You's pow'ful fond ob dancin',
But I'll bet my yeahs advancin'
Dat I'll cure you ob your shines.

Look heah, mule! Better min' out—
Fus' ting you know you'll fin' out
How quick I'll wear dis line out
On your ugly stubbo'n back.
You needn't try to steal up
An' lif' dat precious heel up,
You's got to plow dis fiel' up—
You has, sah, for a fac'.

Dar, dat's de way to do it!
He's comin' right down to it;
Jes' watch him plowin' throo it;
Dis nigger ain't no fool.
Some folks dey would a beat him;
Now dat would only heat him—
I know jes' how to treat him;
You mus' reason wid a mule.

He minds me like a nigger;
If he was only bigger
He'd fotch a mighty figger:
He would, I tell you! Yes, sah!
See how he keeps a-clickin';
He's as gentle as a chicken,
An' nebbber thinks o' kick'n'—
Whoa, dar, Nebuchadnezzah!

Is dis heah me or not me?
Or is de debble got me?
Was dat a cannon shot me?
Hab I laid heah more'n a week?
Dat mule do kick amazin',
De beast was spiled in raisin';
By now I spect he's grazin'
On de odder side de creek.

A Word to Young Men.

One of the meanest things a young man can do, and it is not at all an uncommon occurrence, is to monopolize the time and attention of a young girl for a year or more, without any definite object, and to the exclusion of others of his sex, who supposing him to have matrimonial intentions, absent themselves from her society. This "dog in the manger" way of proceeding should be discountenanced and forbidden by all parents and guardians. It prevents the reception of eligible offers of marriage, and fastens to the young girl, when the acquaintance is finally dissolved, the unenviable and unmerited appellation of "flirt." Let all your dealings with woman, young man, be frank, honest, and noble. That many whose education and position in life would warrant our looking for better things are culpably criminal on these points is no excuse for your short comings. That woman is often injured or wronged, through her holiest feelings, adds but a blacker dye to your meanness. One rule is always safe: Treat every woman you meet as you would wish another man to treat your own sister.

COMMON SENSE.—Many, if not most, of the evils which the impatient and irritated sufferer charges to his ill-fortune, to accident, to the misconduct of others, to the injustice or neglect of the world, will be found, when honestly traced to their true source, to have arisen from a defect in the person himself—to his own want of common sense. Yet this is the last deficiency any one suspects in himself. Men will acknowledge that they are not learned—that they are not witty—that they have not genius. To be told that they have not common sense would offend or astonish the dullest or most humble. Common sense is assuredly the most rare, as it is the most useful faculty which man can possess. What is this common sense which is so freely and unceremoniously claimed by every one as a natural inheritance? It is the judgment of a sound, clear understanding, neither deceived by false appearances, nor distorted by passion or prejudice. It views things as they are, stripped of accidental circumstances, and is misled by no delusion.

Pride is increased by ignorance; those who assume the most are usually those who know the least.

Boys' Rights—By a Boy.

Talk about the women and the darkies, and the—the—all the rest of 'em; none of 'em all are half so badly used as the boys are. I know a lot and can give you all their names. Ask 'em all. They'll tell you to be a boy is to be somebody without a right in the world.

You're to take all the sass that's given to you and give none back, 'cause you're a boy. You are to pay full fare in the cars and omnibuses, 'cause you're a boy, and not a child, and never have a seat, because you're a boy and not a man. Fat lady gets in after it's all full, and looks about her; everybody looks at you. Old gentleman says: "Come now, you boy!" You've paid your sixpence. No matter, that's nothing. You have been on your legs, with a bundle, all day. Who cares? you're a boy! Now a horse has such a load given to him as he can carry; and a man won't take any more than he can walk under. Ask boys what grown folks think they can carry. There is no limit to it.

Who doesn't know a boy who does a man's work, and does it for a tenth of what a man would get for it? Who hasn't seen an advertisement for a boy who writes a good hand, understands accounts, is willing to make himself useful, boards with his parents, is trustworthy, no objections to his sitting up all night, no impudence about him, the best recommendations required, and \$2 a week wages?

Ask boys whether old folks don't make as much fuss about such places as if they were doing you a favor that would set you up for life.

Who wants a boy anywhere? Your sister don't in the parlor. Your father don't; he always asks if you are not wanted to do something somewhere. You make your mother's headache every time you come near her. Old ladies snap you up. Young ladies hate you. Young men tease you, and give it to you if you tease back. Other fellows, it's because they're aggravated so, I know, and always want to fight if they don't know you; and when you get a black eye, or a torn jacket, you hear of it at home.

You look back and wonder if you ever were that pretty little fellow in petticoats that everybody stuffed with caudy; and you wonder whether you'll ever be a man, to be liked by the girls, and treated politely by other fellows, paid for your work, and allowed to do as you choose. And you make up your mind every day not to be a boy any longer than you can help it; and when your grandfather, or somebody, complains that there are "no boys now," you wonder if he remembers the life he led, that he don't consider it as a subject of rejoicing.

There is only one comfort in it all; boys will grow up, and when they do, they generally forget all they went through in their youth, and make the boys of their day suffer just as they did.—[Orphan's Friend.

True Gentlemen.

"I beg your pardon," and with a smile and a touch of his hat, Harry Edmond handed to an old man, against whom he had accidentally stumbled, the cane which he had knocked from his hand. "I hope I did not hurt you. We were playing too roughly."

"Not a bit!" said the old man, cheerily. "Boys will be boys, and it's best they should be. You didn't harm me."

"I'm glad to hear it," and lifting his hat again, Harry turned to join the playmates with whom he had been frolicking at the time of the accident.

"What do you raise your hat to that old fellow for?" asked his companion, Charlie Gray. "He is only Giles, the huckster."

"That makes no difference," said Harry. "The question is not whether he is a gentleman, but whether I am one; and no true gentleman will be less polite to a man because he wears a shabby coat, or hawks vegetables through the streets, instead of sitting in a counting-house." Which was right?

Mr. Bisinghal (city merchant). "Most convenient! I can converse with Mrs. B. just as if I was in my own drawing-room. I'll tell her you're here." (Speaks through the telephone.) "Dawdles is here—just come from Paris—looking so well, desires to be, &c., &c. Now you take it up, and you'll hear her voice distinctly." Dawdles: "Weally!" (Dawdles takes it, and does hear her voice most distinctly.) The voice: "For goodness sake, dear, don't bring that insufferable noodle home to dinner!"

Who was that Bad Boy?

Little Annie was prettily dressed and standing in front of the house, waiting for her mother to go to ride.

A tidy boy, dressed in coarse clothes, was passing, when the little girl said:

"Come here, boy, and s'ake hands with me. I dot a boy dus like you named Bobby."

The boy laughed, shook hands with her, and said:

"I've got a little girl just like you, only she hasn't got a little cloak with pussy fur on it."

Here a lady came out of the door and said:

"Annie, you must not talk with bad boys on the street; I hope you haven't taken anything from her? Go away, and never stop here again, boy."

That evening a lady was called down to speak to a boy in the hall. He was very neatly dressed and stood with his cap in his hand. It was the enemy of the morning.

"I came to tell you that I was not a bad boy," he said; "I go to Sunday School and help my mother all I can. I never tell lies, nor quarrel, nor say bad words, and I don't like a lady to call me names and ask me if I've stolen her little girl's clothes from her."

"I'm very glad you are so good," said the lady, laughing at the boy's earnestness. "Here is a quarter of a dollar for you."

"I don't want that," said Bob, holding his hand very high. "My father works in a foundry and has lots of money. You've got a bigger boy than me, haven't you?"

"Yes, why?"

"Does he know the Commandments?"

"I'm afraid not very well."

"Can he say the Sermon on the Mount and the Twenty-third Psalm and the Golden Rule?"

"I am very much afraid he can not," said the lady, laughing at the boy's bravery.

"Does he ride his pony on Sunday instead of going to church?"

"I am afraid he does, but he ought not," said the lady, blushing a little.

"Mother don't know I came here," said the bright little rogue, "but I thought I would just come around and see what kind of folks you were, and I guess mother would rather your boy would not come around our doors, because she don't like little Mamie to talk to bad boys in the street. Good evening!" and the boy was gone.—[Presbyterian.

INFLUENCE OF FOOD.—DR. HALL (a celebrated physician of New York) relates the case of a man who was cured of his biliousness by going without his supper and drinking freely of lemonade. The next morning, this patient arose with a wonderful sense of rest and refreshment, and feeling as though the blood had been literally washed, cleansed, and cooled, by the lemonade and fast. His theory is that food can be used as a remedy for many diseases successfully. As an example, he cures spitting of blood by the use of salt; epilepsy, by water-melons; kidney affections, by celery; poison, by olive or sweet oil; erysipelas, by pounded cranberries applied to the part affected; hydrophobia, by onions, &c. So the way to keep in good health is really to know what to eat, and to know what medicines to take.

The greatest man is he who troubles himself the least about the verdict that may be passed upon him by his contemporaries or posterity, but who finds in doing good, honest work to the best of his ability, under existing conditions, "its own exceeding great reward."

To live with our enemies as if they might become our friends, to be with our friends as they might become our enemies, is neither according to the nature of hatred, nor in accordance with the rules of friendship. It is not a moral, but really a political maxim.

There is always room for men of force, live men; the smartest must take the lead. Most men are capable of greater things than they perform, and all require the proper opportunity. A feeble man can see the farms that are fenced and tilled, the houses and barns that are actually built, but a strong man sees possible houses and thrifty farms.

Duck Hunting.

I do not like to trouble you, but I should feel very much obliged if you could give me any information on the following subject: Do duck-hunters ever catch ducks in this manner? Put a hollow pumpkin or gourd over your head and wade into the water (weather permitting) up to a flock of ducks, and when amongst them pull them under by the legs and drown them.

R. T. N., Cobourg, Ont.

[I have heard of this plan being adopted in England and Holland, but have not seen it performed.]

Indestructible Boot-Soles.

If the patent for a sort of stone sole for boots and shoes be found as valuable as the inventor considers it to be, what will become of the maxim that "there's nothing like leather?" for though he still proposes to utilize that product of the tanner's skill, it plays a much less considerable part in that instrument of torture known to-day, as it was generations ago, by the name of "the boot." On the well-cleaned leather sole and heel the inventor applies a kind of glue-mortar, consisting of glue insoluble in water, but flexible like leather, and of clean-washed quartz sand. Round the parts to be covered is placed a strip of sheet-lead, standing up as far as the required thickness demands. Into the enclosure thus formed the mixture is poured in a hot state, and then smoothed and made even "all over." When the glue-mortar has become cold, the strip of lead is taken off, and the cast is then allowed to settle and to dry. The use of quartz sand is said to prevent wear-and-tear, so that the nuisance of soling and heeling boots will be abolished.

An Irish piper, who now and then indulged in a glass too much, was accosted by a gentleman with—"Pat, what makes your face so red?"—Plase yer honour," said Pat, "I always blush when I speaks to a gintleman."

SCIENTIFIC EDUCATION.—A lady who lately visited an infant school, was treated to the following exhibition:—Schoolmistress: (unfolding her umbrella)—"What is this, my dear?"—Pupil: "An umbrella, ma'am." "How many kingdoms does it contain?"—"Three." "What are they?"—"Animal, mineral and vegetable." "Name the animal."—"Whalebone," "The mineral."—"The brass." "The vegetable."—"The cotton!"

The words "out of," are the very worst in the language when one is out of patience and out of money; when his wife says she is out of sugar one day, out of coffee the next, out of flour the next; and, finally, out of spirits. The words are very good when one is out of debt, out of trouble, and out of gaol. If a man has a smoky house and scolding wife, out-of-doors is no bad place.

A reverend gentleman, while visiting a parishioner, had occasion, in the course of conversation, to refer to the Bible, and on asking for the article, the master of the house ran to bring it, and came back with two leaves of the book in his hand. "I declare," said he, "this is all we've got in the house; I'd no idea we were so near out!"

An honest Hibernian had come far to see Niagara; and, while he gazed upon it, a friend asked him if it was not the most wonderful thing he had ever seen; to which he replied—"Never a bit, man, never a bit. Sure it's no wonder at all that the wather should fall down there, for I'd like to know what could hincer it; but it's mighty quare though, I'm thinking, how the mischief it ever got up."

A MODEL HUSBAND.—Here is the picture of one that would satisfy the stoutest advocate of "Women's Rights":—He never takes the newspaper and reads it before Mrs. Smith has had a chance to run over the advertisements, deaths, and marriages, &c. He always gets into bed first on cold nights, to take off the chill for his wife. If the children in the next room scream in the night, he don't expect his wife to take an air-bath to find out what is the matter. He has been known to wear Mrs. Smith's night-cap, while in bed, to make the baby think it was its mother!

A SUMMARY EPIGRAM.—Theodore Hook, once, upon seeing a tax collector, whose name was Winter, approach the party he was with, threw off the following impromptu:—

Here comes Mr. Winter, collector of taxes,
I advise you to give him whatever he axes;
I advise you to give it without any flummery,
For though his name's Winter, his actions are
Summary.

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- " Strawberry Garden..... 38
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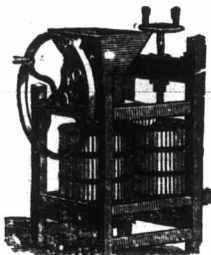
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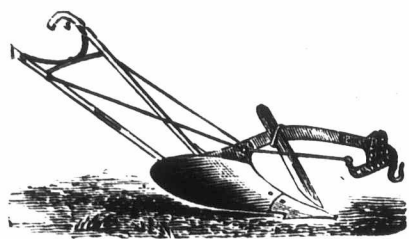
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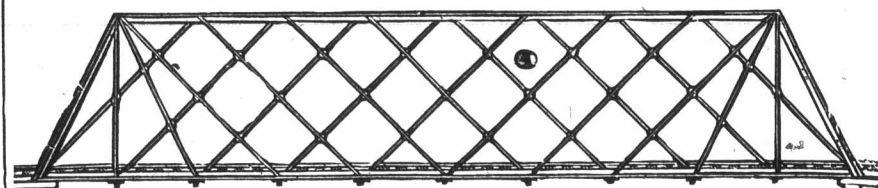
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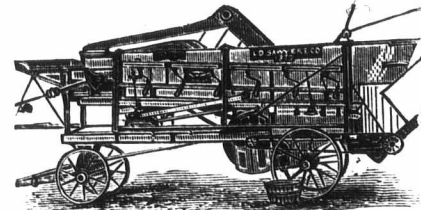
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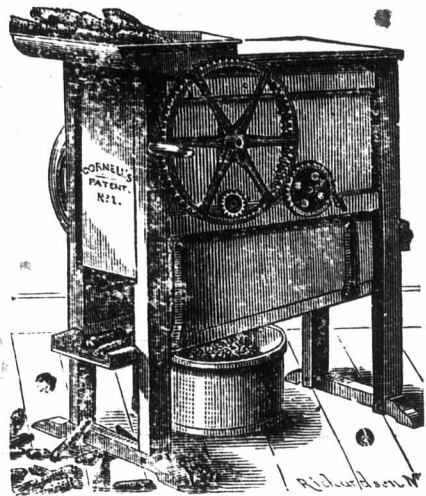
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Melon culture in cold climate.....100
 More of borers.....155
 Noxious insects.....203
 Old orchards.....133
 Orchard in summer, the.....154
 October, work that must be done.....229
 Our first snow storm.....256
 On seeding an orchard.....233
 Planting fruit orchards.....225
 Pasturing orchards.....10
 Pruning grape-vines.....10
 Pear blight remedy.....11
 Planting walnuts.....61
 Peaches.....80
 Quince, the.....79
 Queen of flowers, the.....153
 Roses in pots.....11
 Railway timber planting.....79
 Remedy for apple and peach borers.....79
 Rustic garden fence.....153
 Rose management.....182
 Raspberries, varieties.....202
 Seasonable hints, February.....37
 Starving orchards.....37
 Seasonable hints, March.....60
 Small fruits.....60
 Seasonable hints, April.....78
 Seeding on sod.....78
 Soot in the garden.....79
 Seasonable hints, May.....105
 Spring culture of Tulips.....109
 Strange effect of girdling grape-vines.....132
 Sulfur.....132
 Seasonable hints, July.....134
 Seasonable hints, August.....131
 Seasonable hints, September.....232
 Small fruit, crop of 1879.....203
 Seasonable hints, December.....283
 Straw matting for hot-bed sashes.....283
 Tomatoes.....79
 Treatment of grapes to avoid rot.....79
 Transplanting.....155
 Twig blight.....134
 The Woodpecker in the orchard.....284
 Treatment of evergreens.....284
 Utilizing the white thorn.....10
 Unpruned grape-vines.....109
 Verbena, the.....182
 Work that must be done.....155
 Woodpecker vs. apple worm.....134
 War with cabbage pests, the.....134
 Wash to kill insects.....182
 When shall we sow the seeds of fruit trees.....203
 Yellows in the peach, the.....10
 Yellows on the peach tree.....134

CORRESPONDENCE :-

Agriculture in New Brunswick.....136
 A stamp duty.....88
 Antidote for poisons.....15
 A practical farmer's experience.....286
 A Dominion agricultural society.....286
 Better farming needed.....62
 Bloody flux.....88
 Binder wanted.....112
 Black knot.....135
 Bees and grapes.....183
 Black-leg.....184
 Beet sugar.....87
 Care of stock, the.....15
 Cost of Norman horses.....15
 Cattle salesmen in England.....87
 Collar boils in horses.....135
 Coal tar for squashes.....183
 Draining.....15
 Dust on plum trees.....286
 Evergreens.....111
 Experiments in turnip feeding.....112
 Early strawberries, how to raise.....207
 Flax and pea mill.....62
 Farming needed.....63
 Fencing.....86
 Farmers interest, the.....85
 From Nova Scotia.....111
 Farmers and politics.....135
 Flesh wounds in animals.....135
 Farmers' clubs.....135
 Failure in the growth of seeds.....157
 Farming for profit.....183
 Farming for profit.....207
 Farming in New Brunswick.....230
 Farmers' clubs.....239
 Farming for pleasure and profit.....262
 Fayette Co. fine stock association.....160
 Feeding hogs.....286
 Grain growing near Lake Huron.....39
 Geese, raising.....86
 Grange, the.....88
 Grangers.....135
 Grangers' pic-nic, the.....160

Guinea fowls.....280
 Ground bones as fertilizers.....262
 Government sale at the Model Farm.....262
 Hay feeders.....111
 How to apply superphosphate.....112
 Hungarian grass.....159
 Horse-shoeing competition.....159
 How to raise early strawberries.....207
 How to have apples every year.....207
 Improving a farm.....230
 Jottings around Markham.....22
 Jerseys, Guernseys and Alderneys.....111
 Lice on stock.....111
 Lucerne.....184
 Legislation needed.....262
 Much in little.....40
 Making superphosphate from apatite.....86
 Manitoba.....86
 Morbid affection.....87
 Miscellaneous.....136
 Notes from Michigan.....39
 Nova Scotia provincial exhibition.....262
 Norman horses, the cost of.....15
 Our birds.....62
 Orchard, the.....86
 Premium for sugar-making.....112
 Puslinch farmers' club.....136
 Potato bug, the.....159
 Pruning pear trees.....159
 Paint for farm buildings.....183
 Petroleum as a wood preserver.....183
 Phylloxera or grape-vine flea.....184
 Philadelphia raspberries.....207
 Potato starch.....287
 Preventing fence posts rotting in the ground.....287
 Rinderpest at Washington, a mistake.....40
 Run-down land.....62
 Royal agricultural society of England, the.....184
 Remedy for black knot on plum trees.....286
 Spring harrowing fall wheat.....15
 Stall feeding cattle.....40
 Site beans.....40
 Sugar beets.....64
 Seed, stock, etc.....88
 Swallow manure.....88
 Swiss vats.....88
 Sheep ticks.....112
 Sore shoulders.....125
 Sheep raising.....159
 Seed wheat humbug.....208
 Stock in the Maritime Provinces.....287
 Tax our bulls and stallions.....62
 Tree planting.....87
 Too much taxation.....111
 The North-West.....287
 United States or Canada, which?.....136

STOCK :-

What are our agricultural exhibitions coming to?.....262
 Warts on horses.....262
 Wild oats.....135
 Wire fences.....286
 "Bonnie Jean," description and pedigree of 8
 Breeding for draught.....125
 Breeding mules.....126
 Bog spavin and its treatment.....258
 Cows at calving, treatment of.....126
 Choke cure for refractory horses, the.....204
 Contagious disease of American cattle.....224
 Cooking food.....258
 Danger.....77
 Dangerous.....149
 Dutch dairy, the.....149
 Devons.....176
 Early maturity again.....6
 Early maturity of farm stock.....77
 English notions about the care of horses.....205
 Feeding large or small animals.....7
 Fat stock shown in Chicago, the.....32
 Form of a milk cow.....34
 Feeding stallions.....125
 Fall treatment of calves.....204
 Giving a horse medicine.....8
 Green fodder in France.....149
 Grades as milkers.....204
 Gleanings.....205
 How to breed the saddle horse.....7
 Hot-bed of Pleuro Pneumonia, a.....58
 How to train a colt to harness.....102
 Horse raising in Colorado.....102
 Hogs, feeding for health.....159
 Heavy pigs and how they were fed.....150
 Heaves in horses.....204
 Hog cholera.....225

Important to sheep raisers.....102
 Infectious stock diseases.....149
 Increase of steers on pastures.....258
 Intervals of milking.....285
 Kind of large horses for breeders to select 34
 Long-horned cattle.....224
 Live stock and English agriculture.....175
 Maize as good for horses.....7
 Milk and beef together.....125
 Necessity of pure water for cattle.....102
 Novel horse collar, a.....225
 On cattle plague legislation.....77
 Old short-horn bull Hubback, the.....150
 Oil cake in cattle feeding.....285
 Plate of pork, a.....6
 Preserving sheep from dogs.....77
 Pleuro Pneumonia.....174
 Pampered sires produce puny offspring.....224
 Potatoes for animals.....285
 Question for the U. S. and Canada.....176
 Raising horses on the farm.....6
 Remedy for engorgement with meal.....150
 Sweet corn as stock feed.....77
 Straw as cattle food.....204
 Stock in winter.....258
 Swine disease in the United States.....258
 Shorthorn steer.....33
 Tumor on the neck.....33
 The teachings of the shows.....34
 Training a colt to harness.....175
 United States stock disease.....58
 Value of sheep as manure makers.....7
 Winter management of sheep.....229
 Wintering sheep.....205
 Why stock farming is better than grain farming.....175
 Which breed of colts the best.....176
 Winter care of young sheep.....285
 Wintering colts.....285
 Young Mary.....33
 A plague at Washington.....18
 Annual convention of the New York Dairy-mens Association.....53
 An English dairy company.....54
 A home market for cheese.....151
 Butter changing to tallow.....103
 Coloring butter and cheese.....29
 Corn vs. grass.....103
 Care of milk cows.....104
 Cold system for raising cream.....127
 Cattle for the dairy in England.....151
 Curd mill, its improvement and advantages.....181
 Cheese bandage, its history, advantages and improvement.....197
 Cheese.....52
 Dairyman's association.....53
 Drink for dairy cows.....254
 Drying room, the.....152
 Effect of exercise and excitement on milk.....128
 Ensilage.....254
 Effect of food upon milk.....278
 Full milk vs. skim cheese.....12
 Floating curds.....82
 Feeding milk cows, soiling.....103
 Firm, fat, flaky and fine flavored.....152
 Feeding for milk.....254
 Fattening cattle.....278
 Home market for cheese.....151
 How butter is sometimes tainted.....278
 International dairy fair.....12
 Inheritance of qualities.....278
 Keeping butter in summer.....151
 Loss from bad butter.....127
 Milking.....103
 Mr. H. Wall's dairy, Westminster.....104
 Miscellaneous notes.....151
 Milking machine, new.....223
 Miscellaneous notes.....123
 Oleomargarine.....53
 Our surplus dairy products.....82
 Oleomargarine.....128
 Product of butter and cheese in the United States.....29
 Rennet and its preparation.....197

Scientific butter-making.....29
 Salt for cattle.....104
 The new departure in cheese-making.....278
 Weaning calves.....104
 APIARY :-
 Artificial swarming.....150
 Advantages of attention to bees.....86
 Bee-keepers in council.....261
 Best bee-hive, the.....198
 How far bees will go for honey.....198
 How to know robber bees.....110
 Lessons for young bee-keepers.....282
 Plants for bees.....110
 Reason why bees work in the dark.....85
 Successful bee-keeping.....85
 The prospects for honey this year.....130
 Transferring bees.....136
 Uniting bees.....180
 Winter care of bees.....36
 Wintering bees.....261
 POULTRY YARD :-
 Bad flavored eggs.....206
 Chicken gossip.....84
 Doctoring.....84
 Disease among fowls.....110
 Early hatched pullets.....61
 Fattening poultry for market.....257
 Fowls in orchards.....84
 Gapes in chicken.....110
 Green food.....206
 Gleanings.....156
 Hatching chickens early.....61
 Langshans.....257
 Profit and loss in poultry.....156
 Raising turkeys.....110
 Standard requisites for poultry.....257
 Winter care of fowls.....37
 What kind of fowls.....37
 THE HORSE :-
 Choking.....35
 Disinfecting stables.....261
 Impaction of the stomach.....35
 Lucky laziness.....225
 The glanders, another warning.....152
 Worms in horses.....261
 ILLUSTRATIONS :-
 Bag holder.....225
 Bear, the.....268
 Caladium Esculentum.....164
 Coming events, the burst-up.....200
 Cow milker.....223
 Creamery of Messrs. Hettle & Inglis.....81
 Combined creamer and cheese vat.....127
 Clydesdale mare "Bonnie Jean," and colt.....8
 Chamois and eagle.....245
 Camp scene near Winnipeg, Manitoba.....280
 Drying rooms at a cheese factory.....152
 Ellwanger & Barry's new peach.....80
 Effect of excitement and exercise on milk.....128
 Farm barn.....200
 Flowers.....132
 Indian Corn.....56
 Interior of dairy.....104
 Long horned cattle.....224

Lucky business.....295	Keep your temper.....242	Liberty and health.....19	Fruit cake.....66
Langshan fowl.....257	Lucky domestic.....189	Land, poor.....43	Fresh rolls.....42
Market scene at Ottawa.....57	More truth than poetry.....45	Layering carnations.....163	Furs.....114
Mode of erecting a wire fence.....129	Natural history.....243	Lending a pair of legs.....164	Fit for a king.....156
North Devon bull Shelts 2nd.....176	Occupation.....188	Love gifts.....240	For the hands and skin.....210
New knife curd-mill.....181	Our own.....244	Mr. Brown's offer.....187	For cleaning children's heads.....211
Novel horse collar, a.....225	Princess Louise, the.....241	Mothers' boys.....185	Flour.....211
New design for training fruit trees.....1	Queer tempered people.....45	Mothers and children.....137	Fruit stains.....211
Portable flour mill.....108	Resignation.....213	Medicinal effect of onions.....189	Flickering lamp.....211
Passion vine.....140	Spanish women.....245	Mixed pickles.....211	For sea-sickness.....115
Rustic garden fence.....152	Songless bird.....209	Mixed pickles.....240	For sleeplessness.....66
Rustic garden fence.....153	Two rogues.....189	Mexican life.....295	Fillets of beef and dutch sauce.....139
Riding the mustang.....9	True gentlemen.....298	New Year's greeting.....19	Ginger beer.....163
Sugar evaporator.....180	Tale of a mule.....298	Origin of various articles.....162	Ground tea.....186
Scene in Manitoba.....232	Visit to a pin factory.....270	Oatmeal diet.....164	Glenn cottage pudding.....186
Sharpless seedling strawberry.....32	Wife economy, the.....189	Out of fashion—out of the world.....211	Good mince meat.....293
Smilax.....105	Who was that bad boy.....265	On doing nothing.....239	Household weights and measures.....42
Saving hay.....281	Words for the young.....244	One's friends.....206	Hominy griddle-cakes.....267
Training trees.....163	Who took it.....209	Procrastination.....66	Horse-radish sauce.....267
Travelling near Winnipeg.....177	MINNIE MAY'S DEPARTMENT:—	Parental folly.....185	Hams, how to keep.....139
Travelling in Manitoba.....196	All kinds of annual flower seeds.....90	Pumice stone.....187	How to make an omelet.....186
Trees, effect of snow on.....256	A Farm-house dirge.....162	Proper exercises.....266	Ice-d milk.....211
Window gardening.....240	Arrangement of rooms.....163	Presence of mind.....294	Keeping meats fresh.....18
"Young Mary," southern steer.....33	A warning.....163	Royal or golden eagle.....268	Liniment.....66
THE STORY:—	An Egyptian wedding.....164	Song of the skater.....19	Lime-water and milk.....239
Helen.....41	A hurried dinner.....237	Superstitions regarding Friday.....19	Lotion to promote the growth of hair.....163
Helen.....17	Answers to inquirers.....388	Staining floors.....43	Lemonade.....163
Lucy Winton's trust.....291	An innocent man to be hung, a heartrend- ing case.....23	Scotch fare.....67	Lemon beer.....166
My first and last love.....185 and 161	A noble example.....264	Suspense.....113	Meat, diet.....42
Madge's cousin.....65	Answers to inquirers.....266	Story of two visitors.....162	Mealy potatoes.....66
The day you'll do without me.....236 and 265	Answers to inquirers.....266	Simplicity.....164	Maccaroni and cheese.....238
Ups and downs.....113 and 137	Answers to inquirers.....211	Silence.....187	Moonshine.....267
Who took it.....209	Answers to inquirers.....211	Something worth knowing.....187	Making vinegar.....267
UNCLE TOM'S DEPARTMENT:—	Answers to inquirers.....211	Spirits of turpentine.....240	Milk rolls.....139
PUZZLES:—	Answers to inquirers.....211	Spanish living and dying.....295	Nasturtiums.....238
20, 44, 68, 91, 115, 140, 165, 188, 212, 241, 242, 260.	Answers to inquirers.....211	The tender poet.....19	Oyster Pie.....18
HUMOUROUS:—	Answers to inquirers.....211	Turning the tables.....164	Potted herring.....90
21, 45, 68, 91, 115, 140, 188, 213, 242, 269.	Answers to inquirers.....211	Teas and sentiments.....186	Pickled veal.....139
Avarice incapacitates for enjoyment.....45	Answers to inquirers.....211	Think.....187	Pine-apple pie.....139
A boy's leisure hours.....188	Answers to inquirers.....211	The reasons why.....187	Preserving eggs.....139
At the old farm.....213	Answers to inquirers.....211	The Bear.....268	Peach cordial.....139
An ambitious text.....213	Answers to inquirers.....211	The next best thing.....237	Potato salad.....167
A good word for the bats.....242	Answers to inquirers.....211	Table etiquette.....295	Potato salad.....167
Antiquity of gloves.....244	Answers to inquirers.....211	Uses of an enemy.....268	Potatoes.....167
A word to young men.....298	Answers to inquirers.....211	Uses of the potato.....266	Picking fowls.....211
Be independent.....165	Answers to inquirers.....211	Ventilation of bed-rooms.....210	Plum jelly.....210
Boys' rights—by a boy.....298	Answers to inquirers.....211	Window gardening.....240	Pickled mangoes.....211
Don't leave the farm, boys.....189	Answers to inquirers.....211	RECIPES:—	Potato puff.....239
Father's dinner.....21	Answers to inquirers.....211	Apple tapioca pudding.....42	Pressed veal.....267
Grammar in rhyme.....270	Answers to inquirers.....211	Angel food.....238	Pot on fire.....267
How boys may succeed in life.....45	Answers to inquirers.....211	A tea dish.....210	Pickled nasturtiums.....267
How diphtheria was cured.....115	Answers to inquirers.....211	Boiled custard.....18	Prevention of small-pox mark, the.....19
How they shop.....188	Answers to inquirers.....211	Barley pudding.....42	Ratafia Biscuits.....114
Hint to grumblers.....188	Answers to inquirers.....211	Bean soup or sparkling broth.....42	Roast fowl.....18
How she played the piano.....189	Answers to inquirers.....211	Baked fish.....42	Rosewood steam, a.....18
How Quails are caught in Italy.....243	Answers to inquirers.....211	Bleach grain, so.....90	Ringworms.....114
Holy wells in Ireland.....244	Answers to inquirers.....211	Black spots on the face.....163	Red-currant wine.....163
How to grow.....244	Answers to inquirers.....211	Bachelor's corn cake.....186	Remedies for hiccup.....211
Irish humor.....45	Answers to inquirers.....211	Barberries.....238	Recipe for curing onions.....293
Inside a Turkish Harem.....165	Answers to inquirers.....211	Breakfast biscuits.....209	Steamship dish.....18
Inherited longevity.....189	Answers to inquirers.....211	Cologne water, how to make.....139	Swallowing a pin.....18
It can't be helped.....243	Answers to inquirers.....211	Cheap pudding.....18	Swiss pudding.....66
Isinglass, manufacture of.....269	Answers to inquirers.....211	Cooking frogs.....18	Shirt bosoms.....66
Keep the head clean.....189	Answers to inquirers.....211	Canned salmon.....18	Sandwiches.....42
Keep your temper.....242	Answers to inquirers.....211	Cranberry sauce.....18	Stove polish.....42
Keep your temper.....242	Answers to inquirers.....211	Carbolic soap.....18	Sleep.....139
Keep your temper.....242	Answers to inquirers.....211	Codfish balls.....18	Strawberry sherbet.....163
Keep your temper.....242	Answers to inquirers.....211	Cheese toast.....66	Sour drink.....211
Keep your temper.....242	Answers to inquirers.....211	Celery or carrot soup.....66	Stuffed tomatoes.....238
Keep your temper.....242	Answers to inquirers.....211	Chicken salad.....42	To wash lace curtains.....18
Keep your temper.....242	Answers to inquirers.....211	Chocolate cream.....90	Trees that have been frozen.....18
Keep your temper.....242	Answers to inquirers.....211	Custard apple-pudding.....90	Toilet soap.....18
Keep your temper.....242	Answers to inquirers.....211	Clean silk, to.....139	To prevent stove-pipes from rusting.....42
Keep your temper.....242	Answers to inquirers.....211	Cheese pie.....186	To renovate black grenadine.....90
Keep your temper.....242	Answers to inquirers.....211	Chopped pickle.....267	To remove the odor of perspiration.....163
Keep your temper.....242	Answers to inquirers.....211	Closing cracks in cast iron stoves.....267	To boil onions.....293
Keep your temper.....242	Answers to inquirers.....211	Cure ivy poison, to.....114	To cure mutton hams.....293
Keep your temper.....242	Answers to inquirers.....211	Clean old tea and coffee pots.....42	Vegetable pie.....114
Keep your temper.....242	Answers to inquirers.....211	Cistern water, to clear.....186	Weakness in children.....66
Keep your temper.....242	Answers to inquirers.....211	Christmas cake.....293	Washing of flannel and woolen goods.....66
Keep your temper.....242	Answers to inquirers.....211	Embroidering on wood.....211	Worm medicine, simple but sure.....114
Keep your temper.....242	Answers to inquirers.....211	Embroidering on wood.....211	What shall we have for desert.....139
Keep your temper.....242	Answers to inquirers.....211	Embroidering on wood.....211	White wedding cake.....187
Keep your temper.....242	Answers to inquirers.....211	Embroidering on wood.....211	Water-proof paper.....186
Keep your temper.....242	Answers to inquirers.....211	Embroidering on wood.....211	Waffles and corn batter cakes.....267

