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AND HOME MAGAZINE.

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The Farmer's Advocate

—AND—
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Advertising accounts rendered quarterly.

Advertisements, to secure insertion and required space, should be in by 20th of each month.

Letters enclosing remittances, &c., only acknowledged when specially requested. Our correspondence is very heavy and must be abridged as much as possible.

On the Wing.

Mr. L. B. D. Lapierre, of Paris, complains that we have not said anything about France. He asks for an account of my trip there. No doubt other French subscribers, and some English ones also, would have been gratified to have seen what we have in that country. We crossed the English Channel, leaving Folkestone, and arrived at Boulogne, thence by rail to Paris. Returning, we crossed from Calais to Dover on the double steamboat called the Calais-Dover. This vessel was the one chartered to bring Lord Beaconsfield home from the world-renowned European Conference held at Berlin. This peculiar double vessel is a wonder to navigators; it was constructed in such a form to prevent sea-sickness, but it does not prevent it. These little shallow-built boats have far more disagreeable motions than our large Atlantic steamers; they only draw about 6 feet of water, and our Atlantic boats draw 20; they have not depth enough to keep them steady. The newspapers here continually said that the crops were poor in France this year. The wheat was being cut; we saw men cutting the crop with scythes and sickles; the women were binding it. The crop appeared to us much heavier than any we have ever seen in America; in fact, heavier than wheat crops in England.

A large quantity of peat was being dug in one locality, through which we passed. Thousands of stacks or piles of it were to be seen. There were far more women to be seen than men. They were wheeling the peat, setting it up to dry, and building peat stacks.

AT PARIS

We hired a well-furnished room, for which we paid 4 francs a day, equal to 80 cents. The room, besides the usual furniture found in our hotel bedrooms, contained a table, chairs, sofa, and a fire-

place, if it should be wanted. Meals are served in these rooms, if wanted, at a cost of 25 to 40 cents. This would be for beefsteak or mutton-chop, tea or coffee, bread and butter, or toast, nicely served. This does not indicate the extortionate charges we hear of. This was good enough accommodation for your humble servant. Of course, many go to the most fashionable hotels, and put on such style that they ought to pay dearly for it. We have in our travels found men living in the most expensive hotels that are erected for the wealthy aristocracy, that could not pay their honest debts or keep their families in bread. We took our meals where we choose, sometimes at the restaurants in the Exhibition Grounds. At such places one generally has to pay pretty dearly for all he gets. One day we dined at the Hotel de Louvre. The dining-room is one of the finest, perhaps the best, in Paris. It is very large, with a high-pitch ceiling carved, gilded and painted, magnificent paintings, and silver and gilt furniture of elegant pattern. The first course was melon; second, soup; third, fish; then meats, course after course, I do not remember how many. It would be difficult to find out of what they consisted; they were all very nice, as they excel in cooking. What surprised us most was the absence of cruet-stands. Neither pepper, salt, nor mustard was wanted with anything. Every sauce was exactly suited to the palate. No one asked for anything except it was more wine; every person had a bottle placed by them to commence on. Some, I noticed, called for a second bottle. The oil paintings hung in the reception-room alone we should judge to be worth 100 times more than all we see at our Provincial Exhibitions.

The public squares and boulevards are very large, clean, neat, and well kept. The walks and roads are very tidy, and the trees and gardens are very handsome. The cab horses were the most miserable, poor and jaded lot of horses we have seen. The omnibus and street-car horses were just the reverse. They were strong, well-kept animals. They are principally of the Percheron stamp, well-formed, stout horses, having very wide shin bones, short necks and flat rumps. The Parisians are fond of external show. This is displayed in every way. They are very polite, and do much more to oblige one than Englishmen or Americans.

A SUNDAY IN PARIS.

We have heard Americans say that Sunday dropped into the Mississippi. You would here think it dropped into the English Channel. We record Sunday from 2 o'clock a. m., as the wagons and carts might then be heard wending their way to the market. We went through one of the markets about 9 o'clock. Every space was crowded; business was lively. This is the principal market-day there.

We went next to Le Magdalene. This is the name of their world-renowned place of worship. The interior of the building is gilded, carved and

ornamented with a lavish hand. The rich robes of the priests show to advantage when compared with the white robes of the attendants. On entering we were invited to go forward and take a chair; there are no pews, but the building is well filled with chairs. Women were continually passing along the rows rattling money-bags and demanding the price of the seat, a half franc—this was paid; then a collection was made, for this is high mass. By-the-by, it is high mass every Sunday. There are two organs and two choirs in different parts of the Church, one responds part of the service to the other; the effect was very grand. We cannot say much about the sermon, as there was none, neither did I understand what was said half the time. In the afternoon those that here attended church (there are but few) meet free of charge.

Theatres, concerts, and all kinds of amusements, are well patronized. Sunday is the great day for amusements of all kinds.

We drove through many of the roads in the Bois du Boulogne. Very extensive and beautiful they are—perfectly charming. We then went to

THE ZOOLOGICAL GARDENS,

where a grand collection of foreign wild animals, birds, reptiles, plants, from all parts of the world were exhibited. But the greatest attraction there was a grand concert. The crowd of listeners was really immense; one would have thought that half of the Parisians were present. Only a half franc, or 10 cents, was charged for admittance, but the receipts are largely made up from the sale of wines, liquors, teas, &c., &c. After the concert two elephants were walked round, carrying on each of their backs near a half a hundred of men, women and children. These were followed by dromedaries and camels, each laden with human freight. A large ostrich was harnessed in a cart, and drew this filled with children. We should judge that the bone in this ostrich's leg would weigh more than any bone in a horse. There are nearly 100 diminutive ponies kept on which people ride. The most ludicrous sight we saw in Paris was at this place. A rather short and very broad woman rode past us on one of these animals. Her hinder part was of such dimensions as to eclipse the back of the pony, and covering it in every direction. The wonder to us was that the pony could carry such a mountain of fat. Opposite to this show was a large iron enclosure; in it were men galloping about having a game of tournament. When this was finished wild horses were turned loose and Indians galloped after them with lassos and caught them. Tired and weary we returned to our lodging after spending a most remarkable Sunday. Shame, shame, we hear some say, you ought not to have patronized such proceedings. We would refer Mr. Lapierre and others to our account of Agriculture in France, which appeared in 1874; turn to your bound volumes. We have given a little about the Exhibition; you will see some more in next issue.

Subjects for Consideration.

The winter is the season for comparative rest for farmers. It is the time when all plans should be arranged for the coming season of active manual labor. Man cannot long endure hard mental work and hard manual labor from early dawn till late at night, as many of our farmers work from seed-time till the harvest is secured, without impairing his constitution. Farmers work too much in summer and too little in winter. Part of the time in winter should be employed in maturing the plans to be followed the coming season. Understand clearly what you are doing. You should ascertain what every crop has cost you, and the value of the crop raised. If, for instance, you take spring wheat, and receive interest of money or rent of land, cost of labor and seed, and value of crop raised per bushel, you will find in many sections the spring wheat has cost \$2 per bushel, and on some farms it has cost over \$3. Of course this has been a bad year for spring wheat in some parts of the country; there has not been a good year for spring wheat for the past twelve years in some sections. Reckon the average crop and the average price, and then see what the balance is. In this county it will show a heavy loss. Go over all your produce and estimate the profit or loss. You will find that beef, mutton and cheese have been profitable, and that poultry and fruit have paid.

When in Europe the past summer we went through some of the markets in England and France; also into shops where Canadian produce is sold. Our deduction from personal observations and conversation with others is that Canadian farmers need be under no alarm about over-stocking the European markets with any of the above-named products, and that much higher prices may yet be obtained by us for such; that they will always pay high prices, and that our safest and most profitable plan will be to devote our attention to supplying the European market. That market we can rely on, and the prices of fresh meat will probably never be lower. The opportunity of making them better is in our own hands. Our products do not command the highest prices because they are not equal in quality. By improving the quality we shall increase the prices we receive. Most of our produce passes into the consumers' hands under the name of American. We should at once try to establish a name for Canadian products. The value of our products has been very materially injured by dealers selling inferior articles as first-class goods. For instance, the Red Chaff wheat has been sold as the Canada Club; this has passed into consumers' hands and been found inferior. The price of our good flour has been reduced on that account to some extent. Inferior butter has been shipped for first-class, and been placed on the counters of retailers, till the name of Canadian butter has become a signification for anything disgusting to taste and smell. Slop-fed beef and pork have both reduced the value of our choice meats. These courses of procedure have given such a distaste to consumers that at the present time we cannot obtain as good a price for our good produce as we might for our inferior produce; either the farmers or dealers have had more for the latter than it is worth. It is our impression that at the present time much of our first-class beef is consumed unknowingly in England as English beef, but the manipulators have the profit. There is not a sufficient distinction made in the prices paid by purchasers, the slop-fed, stall fed and grass-fed being all sold for about the same price. To the wealthy judges and consumers of beef in England there is fully 50 per cent. difference in the value of well-flavored, good meat and the ill-flavored, slop-fed article. The Canadian farmers who raise really first-class meat are obliged to bear the loss,

because there is not a proper distinction made. Can no better system of grading products be adopted? Is there not room for dealers to establish a name for supplying really reliable, first-class products?

We must try to improve. It is by raising the best produce that our farms must pay. We may offend some of our readers by stating our opinion in regard to mutton, namely, that we never have tasted on this continent a mutton-chop or a leg of mutton that has been near equal in fine flavor to English mutton. Our Cotswolds, Leicesters and Lincolns will not produce such a fine flavor as the Oxfordshire, Shropshire or Southdown sheep, and as for the Merino mutton—well, it is no wonder the Yankees are thin and eat on the run.

We must have a greater infusion of black and grey-faced sheep among our flocks, if we want to make the best of the best market. They will tend to improve the quality of our mutton. The Oxford Downs are hardly known here, even by name. Not one was to be seen at our Exhibitions this year. You may depend on it that those who are first on the field with a good flock in Canada will make more than those who still hang on so tenaciously to their old breeds and their purse-strings.

The question has been asked us whether it would not be better to hold wheat now, the price is so low. In our September issue we advised all to sell as quick as it was threshed. Those who sold are satisfied, but those who withheld their grain now regret that they have not sold. If you owe any one any back account, you are not acting honestly in withholding your crop; your duty is to pay every debt punctually. Honesty is the best policy. If there is anything wanted for the education or comfort of your family, sell. If you are entirely free from debt and your family have no necessary or just demands, you may then please yourself in speculation. Withholding crops from market is a speculation. Sometimes it may pay, but nine out of ten times the farmer loses by not selling. Wheat is equal to money, and money brings interest. Farmers in withholding crops seldom or never receive any interest, nor recompense for loss or risks. The European market shows no symptoms of a rise. There are immense crops in many places, while there has been a scarcity in India and China, particularly in the latter country, where nearly double the number of our Canadian population have been starved to death. Perhaps something may be done to alleviate the sufferings in that kingdom, but as yet we see no prospects of it. It is strange that in this enlightened age and with abundance of sustenance on the earth, and despite the railroads and steamboats, that seven millions of people should have already perished for the lack of food.

Take care that your turnips are not too warm. There are far more turnips destroyed by being too hot than too cold; they will recover from freezing, but they will not recover from over-heating. Potatoes will be dear in the spring; take care and do not let the frost get at them.

To Produce Richer Milk.

In reply to the inquiry, Can you suggest any article or method that will produce richer milk? the *Country Gentleman* says: "Feed more corn-meal and linseed-meal, and less barley sprouts. Brewers' grains would increase the quantity, but at the expense of quality. Rich food makes rich milk."

Dame Rumor is bustling about in regard to the receipts at the Provincial Exhibition and at the Western Fair. The number of persons on the grounds and the sums received are said not to chime well. Perhaps some of the officials might explain.

The Vitality of Seed Wheat.

The great vitality of seed when carefully preserved from moisture is not unknown to our readers. In former numbers of the *ADVOCATE* we have referred to this important matter. We now have another instance mentioned in connection with Arctic travels. Dr. Schomburg says (in his report on the Adelaide Botanic Gardens) that he received a sample of wheat taken from a quantity left by the American Arctic Expedition ship 'Polaris,' in 1871, in north latitude 81 deg. 16 min. The wheat had been left on the beach exposed to the rigors of a temperature of 72° to 104° of frost for five years, and was found by Dr. Ninnis of H. H. ship 'Discovery' on the returning to England of the last Arctic Expedition. Of this wheat Dr. Schomburg sowed three hundred grains, and of these three hundred sixty germinated. The plants grew well, showed a healthful appearance, and reached a height of three to four feet. The ears contained about thirty grains each, small but plump. From this we may learn the extreme vitality of seed, and why it is that plants spring up in land on which we know that no such plants had grown for years. If we permit weeds to mature their seeds, let us then burn them, stem and seed, lest the seed, preserved in the dark recesses of the earth, grow up when exposed to heat and moisture.

Good Plowing.

The comparative advantages and disadvantages of deep and shallow plowing is still a subject of debate among agriculturists. That deep plowing is, under some circumstances, detrimental to the crops, all admit, but there are some who can only see those exceptional instances, and shut their eyes to the great profit that, as a general rule, is reaped by the farmer who does not merely skim the surface, but cultivates with the plow beneath the often-scratched surface, thereby giving access to air and moisture; they will bring in their descent the necessary stimulants, and the plants will obtain more food and consequently more vigorous growth. Professor Stockridge, in an essay on plowing read before a New England Board of Agriculture, gives in a few words sound advice how to plow. "There are," he says, "two kinds of soil on every man's farm, the agricultural soil and the subsoil. The agricultural soil may be two inches deep, or it may be nine, but it is not twenty feet. It is no deeper than the air can penetrate. If the agricultural soil is too shallow, it may be gradually deepened by lifting an inch of the subsoil at each plowing, bringing it up to the air and enriching it with manure. Our Agricultural Society committees, by their premiums for smooth, shiny, flat furrows, have done the community great harm. Such as oftentimes takes the premium is the very poorest kind of plowing. The soil is best plowed when it is most thoroughly crushed, twisted and broken with the sod well covered. On some kinds of soil I would have the furrows lapped an inch, as the Canadian farmers plow. Let the air and water have a chance to circulate beneath the surface. Light lands, however, should have a flat furrow; we wish to make such lands more compact."

Bran as a Fertilizer.

Our agricultural exchanges have been detailing the profits of using bran as a fertilizer. So much is said of its very beneficial effects on growing crops—root crops especially—that we think it worthy of a trial. Were some of our readers in different parts of the country to try it on a small scale, say a few rods each, they would be doing a good service to farmers generally. If it even fails in producing such crops as some who have made trial of it say it does, the loss will not be great. A Penn-

sylvania farmer says he planted twenty-four whole potatoes last spring, with a handful of bran on each, and covered them with about four inches of soil. Right beside them he planted twenty-four whole potatoes of the same kind without the bran. The twenty-four he put bran on produced three pecks, the twenty-four without bran two pecks. The vines with bran had a dark green color, but the vines without bran were yellower.

Live-stock at Provincial Exhibition.

HORSES.

The show in this department was hardly up to what we have seen in former years, especially in the driving and carriage classes. Owing to the fact that no provision had been made in the plans for the horse stables for enabling the general public to obtain a sight of the animals on exhibition, except when they came into the ring before the judges, it was next to impossible to obtain any satisfactory information in regard to the names and ownership of the various animals shown. In the heavy draught class there are fewer animals exhibited, showing a strong tendency to lay on superfluous fat, than in past years. It is beginning to be found out that these enormously heavy stallions, weighing from 2,000 to 2,400 lbs, that were once in fashion, are not only unsuitable for breeding to the comparatively light mare of the country, but that they seldom prove valuable as stock-getters. In the carriage class there were some good young animals shown, as also in the class of blood horses. The growing demand for horses of good substance, bone and action, for export to Great Britain should induce our farmers to prefer the Cleveland Bay, or a stout, strong-boned blood sire of the English class to any other. Most of the best carriage teams in the country have been brought up for export to England the past season, which may account for the rather slim show they make here now.

CATTLE.

The exhibition in the cattle classes this year is a most excellent one, especially in Shorthorns, Ayrshires and Grades. A few Alderneys were shown, and one lot of Jerseys.

Among the leading exhibitors of Shorthorns the Bow Park Association make a fine display of 24 head by the imported Duchess bull 4th Duke of Clarence, a rich roan of fine form and style, bred by Col. Gunter, England, and purchased at 2,500 guineas in 1876. The Chevalier, a red son of 22nd Duke of Airdrie, out of Malvern Gwynne, is a particularly fine, handsome youngster, bred by Richard Gibson, of Ilderton, near London.

Among the females we notice the fine old 6th Duchess of Oakland, now 11 years old, and still, in her old age a splendid specimen of an old tribe of Shorthorns.

Butterfly's Duchess, bred by George Garne, England, in 1876, is another fine specimen of the so-called plain sort of old-fashioned tribes. Rose of Autumn 3rd, a rich roan of 1876, is the handsomest heifer on the grounds, and easily obtained 1st prize; she is of Booth's celebrated Mantilini tribe. James Russell, Richmond Hill, brings out his fine herd headed by the red bull High Sheriff 2nd. He has several females, among them Isabella, the cow that won the gold medal at the Centennial—she gets 1st prize, while Duchess of Springbrook gets 2nd. The competition between this herd and Bow Park for herd prize is very close; the latter only winning it through having the Duchess bull at its head. Messrs J. & R. Hunter, Alma, bring out a fine herd headed by a 2-year-old bull. The Baron, that is the handsomest bull on the grounds, easily winning 1st in his class, and diploma in best of any age. They also show a

number of extra fine grades. J. I. Davidson, Pickering, brings out several yearlings and calves, and a fine lot they are—all of his own herding. N. G. Pettit and John Fothergill, Nelson, exhibit several fine animals, as also does John M. Bell, Atha, Thos. Boak, Milton, John Dryden, Brooklin, J. W. Stone, Guelph, and A. & W. Watt, Salem. The heifer-calf ring is the largest we ever saw, 28 head being brought before the judges and every one good.

The competition throughout is very close, and the judges evidently very careful in making their awards.

AYRSHIRES.

This class is remarkably well filled and shows an improvement every year. Messrs. Jardine & Sons, of Saltfleet, have a magnificent herd—this was also shown at N. Y. State Fair at Elmira, Western State Fair at Rochester, when they took several 1st and 2nd prizes, the herd-prize and two gold medals. They carry everything before them here, including the Prince of Wales' prize of \$60; herd prize; \$100, special, for bull and 5 five females under 2 years; \$100, special, for best 10 cows in milk. Thos. Guy, of Oshawa, shows a fine herd, and runs Jardine very close. George Thomson, Bright, Jas. Lawrie, Malvern, and Wm. Rodden, Plantagenet, also exhibit fine herds. Lawrie's 10 cows in milk are splendid animals, but rough from the pastures.

HEREFORDS.

F. W. Stone, of Guelph, is alone in his glory in this class. They are fine animals, well adapted as a fine breed to make the best of beef as grazers and early feeders. But they do not seem to be gaining in favor, nor is it likely they ever will until they are offered to farmers at such prices as will induce them to try breeding them on their farms. They do not cross on our native stock as well as Shorthorns, or prove valuable to the dairyman. It is worth consideration whether they should not now be withdrawn as a breed from the prize tests at our shows, at least for a time. Then perhaps this monopoly of the breed by one man would cease.

DEVONS.

Mr. Geo. Rudd, of Puslinch, is the leading exhibitor in this class, though there are one or two others with small herds.

GRADES.

There is a good display, and, as usual, all are a cross of Shorthorn blood or native stock. No other pure breed seems to answer so well for making the right sort of stock for the butcher at so small cost. There are some splendid fat cattle to be seen, notably a pair of 4-year-old grade steers, exhibited by John Mallon, Toronto—they weigh together 5,826 lbs. J. B. Armstrong, Guelph, shows two fine 3-year-old steers, pure Shorthorns. J. Fothergill, Nelson, 2 fat cows, also Shorthorns.

SHEEP.

The display in the sheep classes is not as large as we have seen in former years. The glory of the once high-priced, fancy Cotswolds seems to have departed. The efforts of the ring of speculators who took hold of the breed some few years ago to make them popular with the general farmer, and to add to their value by getting them pedigreed and recorded, have proved a failure. As a mutton sheep they are behind the Leicester in early maturity, feeding qualities and quality of meat. The demand for their wool for combing purposes is but limited. They have nothing to recommend them except great size, large fleeces and handsome appearance when fed up for show. Their flesh is coarse and has a tallowy taste. They are a fine breed for exhibition purposes, both at fairs and at Christmas markets, but no one will eat their mut-

ton when Southdown and Leicester is to be had. Only a few pens of this breed are shown, mainly by John Snell's Sons; James Russell, who shows 23 head, including 8 recently imported from England, among them the 1st prize shearling ewes at the Royal this year; Birrell & Johnston, and one or two others. In Lincolns we notice a lot of the real simon-pure of this breed, recently imported by John Geary, of London, from the flocks of C. B. Robson, Bunker Hill, Lincolnshire, and Arthur Garfit, of Scothem, Lincolnshire. These sheep are remarkable for their fleeces of extra fine, long silky wool, but are thrown out by the judges here for want of size and fat. Samuel Longford, Granton, has 14 head in this class, very large and fat; C. S. Smith, Acton, 20 head; A. Oliver, Avonbank, 16 head. They are Canadian Lincolns, a sort of cross-bred sheep that has no particular merit about it unless it is size and aptitude to fatten.

In Leicesters the exhibit is the largest of any of the sheep classes, and this breed seems to continue to retain its hold as the general favorite of the farmer. There are a large number of exhibitors in this class, the leading ones being Wm. Somers, Blanshard; A. Oliver, Downie; Humphrey Snell, Clinton, and C. S. Smith, Acton.

Southdowns make a good display, the large flocks of Robt. Marsh, Richmond Hill, H. H. Spencer, Brooklin, D. Perley, Paris, F. W. Stone, Guelph, and Simon Simson, Kettleby, being conspicuous. The 1st prize shearling ewes of Thos. Douglass, Galt, are beauties. This breed will rapidly gain in favor now that our farmers find a market for mutton from exporters to England. The Southdown crosses better than any other on our native sheep, and the lambs come early in the season, arrive early at maturity, and are quick feeders on comparatively rough pasturage. For the purpose of raising mutton for a foreign market they are the same among sheep as the Shorthorn among cattle. Many of the Leicester flocks might be improved as mutton sheep by a cross or two of Southdown blood upon them.

There were no fine-wooled sheep exhibited, and the few fat sheep shown were of inferior quality as regards their mutton.

SWINE.

The exhibition is fairly good in all departments, though but moderate as to numbers. In Berkshires A. A. McArthur, Lobo, makes a fine display, though his pigs are mainly young animals. He had just been at the Michigan State Fair, where he took a large number of 1st and 2nd prizes, and the grand prize for the best display of swine. He takes 1st prize here for boar and sow under one year with 2nd Earl and Countess of Balmoral. They could not be beaten even in England, we think. John Snell's Sons make a large display, as also does the Bow Park Association.

In Essex swine Joseph Featherstone, Credit, is the leading exhibitor, with several fine animals imported this year from England. Jas. Hewer and Jas. Anderson, Guelph, also show several in this class.

In Yorkshires, J. & R. Leslie, Hornby, exhibit some fine pigs. Joseph Featherstone has some recently imported.

In Suffolks the leading exhibitors are C. Edmondson, Brantford; Jas. Main, Boyne; A. Frank & Son, Cheltenham; J. L. Peacock, Kincardine; J. & R. Leslie, Hornby; Robt. Chadwick, Burnhamthorpe; and last, the largest, is Jos. Featherstone, Credit, who makes a fine display, including a number of animals imported this year from England. He tells us that he this year exported 8,000 cattle and 4,000 sheep to the English markets, and finds the business quite profitable.

What's the Matter with the Butter?

The *Monetary Times* in a very opportune article replies to the queries: Why does not England take our butter? What has become of the buyers? and What is to be done with the butter? The falling off in the demand for Canadian butter is attributed, first, to the importation of oleomargarine into England, and to the fact that it has met with favor in the English markets. The quantity now imported into Britain is 30,000 packages per week, and the price at which it was laid down this season has averaged 68/ per 112 pounds. The above paper says: "We have seen correspondence, and have conversed with leading men in the trade who assure us the grain and flavor of oleomargarine, when cut up for retail, are very much preferable to an average sample of Canadian butter when shipped fresh to Britain, and that dealers can sell the oleomargarine at 10/ more per 112 pounds than they can get for Canadian butter. Thus a foreign and new competitor has entered the best and almost the only market for our butter, and has secured a demand for three times as much butter per week as we can produce, and which sells well and pays well at 10/ to 15/ per cwt. less money than consumers will give for average Canadian butter as it usually appears in the English market."

"What has become of the buyers?" They have betaken themselves to the cheapest (that is, the American) market. Canadian buttermakers, they found, were not prepared to sell unless they could get what they thought it ought to bring, while the American buttermakers were free sellers week by week at the best price which the competition of the continent would pay. This is what has become of the buyers.

To-day the bulk of the butter made in Ontario since the 1st of May last is unsold, and the summer-made stock is stale, has lost its freshness, and for table purposes is absolutely useless. We would say to our readers—if you have made a mistake, don't add folly to folly and refuse to sell your fall butter to a buyer unless he will take your summer stock also, in one lot or at one price. Who ever heard of a tailor refusing to sell a man a pair of pants because he did not want a coat and vest also! Sell at once the summer accumulation of butter at the best price obtainable, and do the same with the fall stock. If Canada had sold her butter when it was two weeks old, she would have received 4c per pound more than she will now, and the same is true of the fall make in comparison with selling three months hence.

We regret exceedingly to learn that our creamery establishments have nearly all fallen into the same error of holding their stock because they could not get the price they thought it ought to be worth, and hence their stock is gone stale, and is not wanted.

The Milk Industry of the Country.

In common with the agricultural press of the country generally, we have been urging the policy of farmers devoting their attention more to stock-feeding than they had been in the habit of doing. The uninterrupted succession of grain crops, and especially of wheat, had well-nigh exhausted the land in many of the older sections of the country of every particle of plant food, and rendered a complete change in the system of farming a matter of necessity. There has been a partial change; there are more live stock on our farms, and, taken as a whole, there is a higher quality of stock. With the increased number of farm animals there is less wasteful exhaustion of the resources of the soil. There has been a gradual approach to a better system of agriculture.

The milk industry of the country has grown in greater proportion than other branches of stock-feeding. The raising of young stock, and the feeding of beef and mutton for home consumption and for foreign markets, has not kept pace with the dairy industry. It is well to consider how far we have succeeded in this enterprise, and if it has been as profitable as it might have been if otherwise conducted.

The price of dairy products, as well as of bread-stuffs, is ruled by the English markets. To English buyers we must look for remuneration for our expended capital and labor. While English consumers are willing to pay remunerative prices, they will pay such for good articles only. The *Agricultural Gazette*, in reference to home products of the dairy, says: "The immense differences of price exhibited in the cheese market are increasingly felt to be both a scandal and a danger, now that it is seen how American imitations are making the inferior qualities of home manufacture unsaleable. * * Only last week we quoted certain sales of cheese at 2d. per lb. The milk from which it was made was just as good as that from which the best Cheddar at 9d. to 1s. per lb. is manufactured. In the one case the milk realizes close on 9d. to 1s. a gallon; in the other only 2d. And the whole of this disaster takes place in the dairy."

The farmer has taken land and managed it well; he has purchased, bred and managed cattle with judgment and skill; he has provided hands for milking and delivered the abundant produce morning and evening at the dairy door. He has done his part of the business well, but the question of profit and loss is on almost every farm outside of his labor. Unless 7d. a gallon be made off the milk, he can pay neither his labor bill, his rent, nor the maintenance of his family. What an utter failure it must have been when the cheese manufactured was sold for 2d. per lb.! What a failure it is felt to be even when the ordinary lower prices, 40s. to 50s. a cwt. are realized, which are now alone obtainable for ordinary qualities! And yet at the very time when these prices have to be accepted, we have reports of dairies sold for 80s."

In referring to this subject another English writer says: "The other day I saw two dairies of cheese made from exactly similar lairs, for the farms interlace each other, and from a similar stock of cows, and from equally as rich milk; yet one fetched at the rate of £40 per ton more than the other."

The great difference in value and price of cheese in the English markets exists to as great an extent in Canada, and throughout all North America. In fact, while poor cheese is almost unsaleable, even at very low prices, there is a fair demand for a good article, and the same remarks are applicable in a still greater degree to butter. The selling price in Montreal market for low grades of butter in October was 5c. to 5½c. per lb., while in the best grades there was a good business at 14c. to 15c. The *Star*, in a market report, says: "The cheese trade shows some improvement, but this only affects the late made cheese of perfect flavor and condition. The great bulk of stocks held here and in the country are unsaleable at present. Choice butter meets a ready sale at current values, and shipments of this class are moving more freely. The poor stocks, however, that have no positive value, are very large, and these shippers pass over with the utmost indifference."

The great loss sustained in the milk industry of the country by careless or slovenly dairy management is a loss not only to the individuals who are responsible for it, but to the country at large.

The Manitoba Agricultural Exhibition

This exhibition was held October 9, 10 and 11 in the City Hall and Dufferin Park, Winnipeg. The entries up to Thursday morning, the second day of the show, numbered 1172, classified as follows: Thoroughbred horses 9, heavy-draught 3, general-purpose 23, horses in harness and saddle 39; Durham cattle 19, Ayrshire 4, Grade 35, working and fat cattle 30; sheep 30, swine 39, poultry 36; provincial manufactures 27, Canadian 7, domestic 55; field grains and seed 69, field roots 95; vegetables, dairy products, fine arts, needlework, etc. The Exhibition Hall did not present so good an appearance as last year. The West did not send forward its products, nor did there seem to be as great an interest taken in it.

THE GRAIN

though of good quality did not fairly represent the capabilities of the province. Both in quantity and quality wheat, barley and oats fell far short of what they should have been, though the quality would in other places be considered good.

The display of

ROOTS

was excellent. Potatoes, turneps, carrots and mangolds for size and quality could not be surpassed. Of

FRUIT

there were some good specimens, giving fair promise of what may yet be grown in the Prairie Province. Summer apples and Siberian crabs were exhibited, the latter especially proving quite a superior exhibit. The display of

FLOWERS

was not large, but the varieties were of the higher orders.

DAIRY PRODUCTS.

The display was the leading feature of the exhibition. In butter there were about fifty entries, and it was said by judges that there was not any in the whole collection that was not first-class.

CATTLE.

The exhibits in this class were much admired, especially the thoroughbred Durhams of Messrs. McDonald, McAllister and Gervie, and an Ayrshire bull, cow and calf, exhibited by Mr. Andrew.

SHEEP.

There were only two classes—Fine-wooled and Long-wooled. There were, however, good pens of Southdowns, Leicesters, Cotswolds and Grades.

Profits of Heavily Manuring Clay Soil.

A writer in the *N. Y. Tribune* says the plots which his father manured so heavily thirty years ago yielded far heavier wheat this year than the other portions of the field. From the yield of one load tallied and threshed by itself, he estimates the produce as over 60 bushels per acre. "Our clay," he says, "does not soon forget a heavy manuring." This fact is not unknown to many observing cultivators of the soil. The profits derived from a heavy application of manure are not to be calculated merely from the additional produce of one crop. The improvement of the soil from the good cultivation, and more still, from the heavy manuring in one season, makes itself known in the increased profits reaped by the farmer in succeeding years. This is an invariable rule in animal and in inanimate nature. Good treatment of land or of beast is pretty sure to entail a commensurate profit, while the ill treatment of either is a source of certain loss.

The Clawson variety of wheat is hardy and prolific, but the Fultz in both respects is fully equal to it, and ripens one week earlier.

Storing Roots for Winter.

For harvesting and securing roots for winter-feeding the month of November is the time. Some of the root crops have been already removed from the ground. Potatoes are secured—at least they are taken from the ground where they were grown, if not stored in the cellar or root-house. Mangel wurzel not being so hardy as turnips are generally taken from the ground in October, lest they might suffer from the early frost, but they are, for the most part, piled in heaps in the field and covered with leaves, where they are left for some days to sweat before they are put into the root-house or pit. This sweating process is carried out by many good farmers with turnips as well as mangels.

It is of great importance in securing roots for the winter that they be kept at such a temperature as to prevent heating on the one hand and freezing on the other.

In some parts of the country little is known by farmers of the culture or care of roots for winter-feeding their stock. For them some brief directions on storing cannot come amiss. The primitive way is to place them in long heaps on the surface of the ground, and cover them with straw, and cover the straw with earth. The pile may be of any length most convenient, and about four feet in length, tapering to the top. Due precautions are necessary to secure sufficient vent for the escape of the heat produced by the heaping together of a quantity of fresh-dug roots, and the gas caused by their fermentation. The covering of earth should be sufficient to save the roots from frost, and a drain should be made to carry off any water.

It is better to store roots in well-constructed pits where the ground is perfectly dry. These pits may be dug from two to three feet deep, and from four to six feet wide. What the length may be is immaterial. The floor of the pit should be graded so that no water can lodge in it; and drains should be dug round it in such a way as to prevent any water from lying about the pit. In our climate it is better to have the pit extending east and west that both sides may have an equal temperature. It is well that the layers of roots have the space between them filled with dry sand or earth to absorb the moisture and preserve them in a fresh condition. The roots should be piled up to a ridge, as when piled on the surface, and boards placed so as to cover the sides of the pile, if they can be had. Over the pile so prepared, there is then placed a good covering of straw; then cover with earth—a light coat at first till the heating and sweating of the roots are over, and then earth enough to keep out the frost. Chimneys made of boards should be formed at regular intervals through the covering, connecting with the roots to secure perfect ventilation. They should be closed in very cold weather as a preventive against frost.

These chimneys or pipes can be made out of inch boards, such as are used in fencing, four inches and two inches wide. Two opposite sides should be some inches longer than the other two, and over these longer ones a board may be nailed to keep out snow or rain.

Potatoes may be stored in the same way as roots for stock-feeding, if there be not a root-house or room enough in the cellar. Potatoes that are to be kept till spring keep, if properly pitted, fresher than in the cellars, whether intended for table use or seed. We have found it so. But they must be pitted when dry, and the storing done in workmanlike manner. The greatest disadvantage attending this method of storing roots is the difficulty of getting them when wanted during the winter. On this account a root-cellar or a field-cave is preferable to pitting.

Veterinary.**Vertigo (Megrims).**

A correspondent wishes some advice as to "staggers"—"Is there any preventive, any remedy, when attacked?" We give space to the following reply on the subject from the *N. Y. World* :—

Where acute attacks of vertigo (megrims) have been neglected and allowed to come and go of their own accord without resorting to effective remedies for removing the direct primary cause producing the attack their eradication would prove very difficult. Effective preventives of an attack of this disease are of far more value, utility and profit than all the pounds of cures imaginable. The seat of the disease is located in the stomach. There has been neglect in the dietary and general stable management of the animal attacked with disease now under consideration. The consequent result of this neglect and oversight is a disturbance of the brain-function and the nervous system, and the disease therefore must be considered as incurable so long as the brain-function and nervous system remain in this abnormal and pathological condition. Regularity in the hours of feeding and watering, sound and sweet grain-food and provender, pure and soft water given in sufficient quantities only as the occasion requires, will prove the most efficacious treatment and preventive of an attack of vertigo I know of. But when this rule of reasoning has been neglected, overlooked and consequently disobeyed, attacks of vertigo are the result. Hence the stomach of an animal developing the slightest diathesis to an attack of vertigo should never be allowed to become distended with provender. In these cases it should be kept in rather an empty condition. Immediately after the first attack of vertigo and when the animal has so far recovered from it as to be conscious, a mild laxative drench is requisite and should be administered. The following is adapted and will be found efficacious:—Twelve ounces raw linseed oil; two drachms finely pulverized pure Cape aloes, and one drachm of *antimonii et potassa-tartrass*. Incorporate well together in a common drenching horn, or a smooth-necked champagne bottle, and after elevating the head well pour the drench slowly and gently down the throat. Repeat the drench three times, allowing five days to intervene between each dose. The solid food given the animal while under treatment should consist of equal parts of purely sweet and sound bran and oats, made into a mash and properly seasoned with salt. Not more than six or seven pounds of this mash food should be fed at any one time, and not more than three times in every twenty-four hours nor more than six quarts of pure, soft and fresh water given at any one time, nor oftener than three times in twenty-four hours. When water is craved oftener and in larger quantities it should be acidulated with cream of tartar; two drachms of the latter well mixed in six quarts of water will be a sufficient quantity. Small messes of carrots or Swedish turnips, well washed and sliced, will be found very beneficial to feed twice daily. If the season permits the animal should be turned out on short pasture. But in all cases where dry hay or provender has to be fed, not more than one-half the usual allowance—seven or eight pounds per diem—should be given. No corn or other heavy grain, whole or ground, should be fed.

Disease of Liver and Mesenteric Glands in Cattle.

The *Country Gentleman* recommends the following:—"Give the following at one dose:—Linseed oil, 1 quart; tincture of opium, 1 oz.; tincture of aconite, $\frac{1}{2}$ dr.; mix. Afterwards give every other day for a week the following, in thick linseed gruel.—Powdered opium, 1 dr.; calomel, 1 dr.; tincture of aconite, 20 drops. Then give twice a day the following in 1 quart of warm stock ale:—Powdered gentian, $\frac{1}{2}$ oz.; powdered ginger, 3 dr.; caraways, 1 oz.; powdered ammoniated sulphate of copper, 3 dr.; mix. The best food is a great necessity, and of that which is easily assimilated. Oil-cake, cotton-seed cake, oatmeal flour and good hay are the best. But in some cases the mesenteric glands are so disordered in function that no treatment is beneficial for more than a brief period.

The Horse.**The Horse for the Farm.**

In stock breeding the farmer should have some definite object in view. In this department, as in many others, there is too little attention paid to this important matter. A farmer breeding young horses to work on his own farm should endeavor to have such as are most applicable to it. If the farm be a heavy clay soil, the horses for the plow should be heavy in proportion to the soil, but in no case should the farmer's horse be a dull, sluggish animal. He should be of high spirit and mettle, inherited from his sire. A writer in the *Rural New Yorker* says: "The slow, heavy horse is no horse for the farmers in these times. A medium-sized, active animal that can go from eight to ten miles per hour on the road, and haul two tons per pair on the fair, is the farmer's horse."

Judging Draft Horses.

We deem this a good time to enter a protest against the prevailing custom of judging draft horses in the showing mainly with reference to weight, as one would judge a group of fat oxen prepared for the butcher's block. In the latter case, the quantity and quality of the meat are the primary considerations; but we fail to see why such a test should be applied to the former. We don't eat horse flesh in this country, consequently mere weight of carcass is of no value except as it gives greater ability to draw a heavy load; and if this weight be made up simply of an accumulation of adipose tissue (fat), it is a positive cumbrance rather than a help, and should be judged accordingly.

There can be no question that the size is an important feature in a draft horse; but to be of value, the desired weight must be made up of other tissues than fat. Bone and muscle must form an important part in making up this weight; and even here we cannot depend upon the tape lines nor the scales in making an award. The quality of each is a vital consideration. If the indications are that the bony tissue is of a soft, porous nature; if the joints are gummy and defective, or the muscles flabby and ill placed; the hoofs flat and brittle or too much contracted; or if the disposition be sluggish and dull, like that of an ox, no amount of mere weight should be permitted to atone for such serious defects.

A good draft horse must possess strong vital organs, which fact is usually indicated by the form and relative size of the trunk. His joints and legs must be strong and perfect, free from curbs and spavins, the skin lying close and firm to hard and elastic cords, with an entire absence of "beet" upon those parts. The feet should be large, neither flat nor mule-shaped, the horn hard and elastic, but not brittle. The bottom of the foot should be examined to see that it possesses the desired concave appearance, and that the frog does its work perfectly, because it is in the feet that our heavy draft horses are most notoriously defective. As we have said in a former number of the *Journal*: The principal requisite of a good draft horse is, good size, made up without a superabundance of fat; but to this must be added, docility, soundness, and endurance. Given all the valuable qualities above described, in perfection, and then the more of action and style he possesses, the better. He may be nearly perfect in all respects, and yet be too small to be classed as a first-class draft horse. On the other hand, he may weigh a ton, but if the weight be made up mainly of fat, or if he be ill-tempered, unsound, or lacking in endurance, his value is materially lessened. He may possess all the points above enumerated and yet be so deficient in energy, and so heavy and sluggish in his movements, as to come far short of a perfect draft horse.—*Live-stock Journal*.

Dairy.

Fraudulent Tampering with Milk.

BY L. E. ARNOLD, SECRETARY AMERICAN DAIRYMEN'S ASSOCIATION.

In every community there may be found people the moral qualities of whose conduct are governed only by a regard for reputation, accompanied, perhaps, with some little rudimentary traces of conscience. Such persons will do little dishonest things in the dark, but will be very careful to avoid even the appearance of evil in daylight. They might not steal from one's pocket or desk, but they would secrete a lost pocket-book should they find one under circumstances such that they could keep all knowledge of the finding to themselves.

The early days of the factory system frequently brought such men to the surface. It was then pretty generally believed that 10 to 15 per cent. of water might be added to milk without the possibility of detection. The producer was unable to distinguish the dilution from pure milk, and supposing everybody else to be as unable as himself, many a man was found willing to avail himself of the supposed situation, to swell his factory dividends. But soon a better knowledge of milk was developed, and not only dilutions, but also skimming and saving out strippings could be detected, when frauds in this direction, from being frequently exposed, became quite rare. Recently, however, these fraudulent parties seem to have been gaining, as several factorymen in different parts of the country have lately inquired for the readiest and most efficient means of convicting defrauding patrons. The following means for detecting suspected frauds may be of some interest to others as well as to enquirers.

A large aggregate of observations by different observers has shown that the average specific gravity of the mixed milk from a herd of healthy cows, taken at 60° F., is 1,032, water being 1,000, and that the specific gravity of such milk never falls below 1,029, nor rises above 1,034, unless affected by some extraordinary circumstance. As these are the extreme limits for healthy milk, the courts of New York City have been in the habit of convicting whenever milk has exceeded these limits, especially in the direction of dilution. Such wide deviations from the well-known weight of normal milk afford sufficient evidence to convict in any court.

These variations of specific gravity may be indicated on the lactometer in common use in cheese factories. In constructing a lactometer the bulb is placed in water at 1,000, and loaded till the stem sinks to a certain point which is marked. It is then placed in milk at 1,032, when a greater length of stem rises above the surface, and the point at the surface is also marked. The length of stem which rises above the liquid by reason of the 32 units of gravity by which the gravity of milk exceeds that of water, is divided into 100 equal parts, and hence each unit of gravity is represented on the stem of the lactometer by $3\frac{1}{8}$ degrees. In graduating the stem of the lactometer the lower end or point in contact with the surface of milk is marked 100. To find the point on the graduated stem which will correspond to a gravity of 1,029, we have only to multiply the difference between 1,032 and 1,029 by $3\frac{1}{8}$, and subtract the product from 100. Thus: $100 - 3 \times 3\frac{1}{8} = 90\frac{5}{8}$, the indication on the lactometer for a specific gravity of 1,029; and $100 + 2 \times 3\frac{1}{8} = 106\frac{5}{8}$, the indication for a gravity of 1,034, and in the same way for any other specific gravity.

A factoryman, therefore, having milk which at the proper temperature shows on the lactometer a less figure than $90\frac{5}{8}$, or a higher one than $106\frac{5}{8}$,

ought to be able to convict on the evidence of the lactometer alone, because it demonstrates a condition clear outside of the known limits of pure, healthy milk.

But to wait for such wide deviations from purity does not afford sufficient protection to factorymen, for it would allow a patron to water till the indication was 91, or skim till it was 106, and still be within the limit of variation and out of the reach of prosecution, though furnishing a diluted or skimmed milk.

Fortunately there are other ways of proving smaller frauds in which the lactometer plays an important part. It has become a well-established fact that the mixed milk of a herd of grass fed cows never varies more than two or three degrees above or below the point indicated by 100 in the stem of the lactometer. Individual cows show wider variations, but the average of herds is always close to 100, unless some unusual condition is present to account for a wider variation.

With these facts in view the factoryman may proceed as follows:—By a frequent use of the lactometer he will keep track of every patron's milk, and if he finds one varying much from 100 he may well suspect it has been tampered with. Suppose, for example, he finds the milk of one patron to indicate 105, while all the rest are close to 100, it would be a sufficient reason for suspecting skimming or saving out strippings. Having made several observations to the same effect and recorded the result, he will set a sample of the milk for a few days in a graduated cream gauge, and note and record the result. Suppose he finds the indication for cream to be 8 per cent. at the end of 24 hours at some certain temperature, which we may put at 60°. Having settled these facts he may send a man, or more than one if necessary, to the farm of the patron at milking time to see the milking done, and that the milk goes to the factory pure. Suppose this milk when tested shows 100 in the lactometer and in the cream gauge, 12 per cent. of cream. After repeating these observations a few times, with the same result, he will have all the evidence necessary to sustain a suit for damages, for the facts here developed are proof positive that one-third of the cream had been abstracted in cream or strippings.

Should he find another patron's milk lighter than usual, say, indicating 95, it would be a sufficient evidence of watering to require investigation. He will first set in cream gauge and note the result, which we will suppose to be 11 per cent. of cream. Then he will proceed as before to see the milking done, and that the milk goes to the factory pure, and that in the cream gauge it shows 12 per cent. cream and 100 in the lactometer. Such a test once or twice repeated will be proof positive of watering 5 per cent., and be sufficient ground for conviction.

This mode of testing is applicable where milk is delivered twice a day. If delivered only once a day a sample of the mixed milk, both at evening and in the morning, must be obtained and positively known to be pure, and tests made as above and compared.

This course of testing will expose all the cases of fraud that are usually met with in factory practice.

Instances rarely occur in which after milk is made heavy by skimming or saving out strippings, the gravity is again reduced by adding water till it will show 100 on the lactometer. When fraud is practiced in this way it will be indicated by the appearance of the milk and the cheat demonstrated by the cream gauge, in the same way as in other cases.

Whenever it can be done, the best way to catch rogues suspected of tampering with milk is to send spies to watch them and catch them in the act. But this cannot always be done, and when it cannot be the other modes may be resorted to.

Good Points of Ayrshires.

A writer in a late number of the "North British Agriculturist" says:—

Mr. McAdam, of Rome, New York—perhaps one of the best living judges of an Ayrshire cow—says that "the principal points are her udder and teats. The udder must reach well forward, and be firmly attached to the body, neither coming out behind nor hanging loosely down; the quarters alike in size; and the teats set on equally and widely apart, neat and not very large, cut square at the top like a cork—not blown or hanging together like a bunch of parsnips under a loose flabby bag, as the shorthorns often have. A beautiful udder is the *sine quo non* of the Ayrshire cow."

Our opinion in regard to milking qualities is that if the eye be full and lively, the skin thin, soft and mellow, the forequarters light, with the shoulder top thin; the hindquarters broad, with the hook and calving bones high, though not presenting a pleasing contour; the milk veins well developed, running zigzag, and ending in a large opening, or if a large opening be found in addition, all the better—the purchaser will not, in nine cases out of ten, regret his bargain. It must, however, be borne in mind that exceptional animals milk well in any shape; but the above hints will form a general guide. It may be well also to point out some of the defects which have tended to restrict the increasing numbers of this breed. The small size is an objection, but on a proper comparison, as made by Robert McAdam, it is found that nine shorthorns will eat as much as ten Ayrshires, and with equal numbers will give a fifth less milk. A feasible enough objection is the relatively poor result obtained from the worn-out carcass; but this disadvantage is more than compensated for in her other good qualities. Small teats, too, are an objection, more especially when the milking is done by men; and breeders would do well to give attention to this particular. Another defect, likely descending hereditarily from the native breed of cattle, is the want of docility and evenness of temper, which in a greater degree characterizes other breeds; but here too in the province of the breeder may at least a partial remedy be found.

A good Ayrshire cow will give 520 gallons of milk, 480 pounds of cheese, or 200 pounds of butter per annum. She herself weighs about 850 pounds, and many instances are known where the annual milk product weighed six times the cow which gave it. Prof. Arnold quotes one which, weighing 1,080 pounds, gave from 6,000 to 8,000 pounds of milk annually, that of 1874 being 8,271 pounds. The milk of the Ayrshire, when tested with the microscope, is found well stocked with nitrogenous matter, and the butter globules are numerous but very unequal in size. This defect is, no doubt, prejudicial to the Ayrshire in butter comparisons, for the butter is not all got, except by very skillful churning. A pound of butter is usually obtained from 25 pounds or $2\frac{1}{2}$ gallons of milk; but on old rich pasture, or when well fed, the quantity required will be reduced by a fifth.

Firm Butter.

An English contemporary recommends the following as practiced here during hot weather for rendering butter firm and solid during the process of churning:—To the cream that is expected to make twenty pounds of butter, add one teaspoonful of carbonate of soda and a teaspoonful of powdered alum mixed together. This of course does not enter into the butter, and if it did it would be harmless, but passes away with the buttermilk. It is worth trying by those who have not perfect conveniences for making butter. If used the ingredients should not be mixed until the time of putting into the cream, but should be kept in separate tightly corked bottles.

Milk Comes Through Inheritance.

A cow eats food and milk is made, says Dr. Startevant, 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. Feed the wild cow high and her yield is slight. Large quantity of milk comes largely through inheritance. 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 authorities that a mere increase of food will not change the quality of the milk, while it will increase the quantity.

Stock.

Apples as Food for Stock.

BY ALEXANDER HYDE.

A correspondent thus writes:—"You spoke, in one of your recent *Times* articles, of the use of apples as food for stock. I have an immense crop of apples and so have my neighbors, and we want to know as definitely as possible how much apples are worth for feeding to milch cows, horses, pigs, &c. If they can be fed profitably, it will help greatly in getting rid of surplus crops. I am a temperance man and don't believe in making more cider than is needed for vinegar and apple sauce. Should apples be cooked or fed raw?"

The feeding of apples to stock is no new idea. We have always fed more or less every year as the crop was more or less abundant, and have always found great advantage from the feeding. We have often heard it said that apples had a tendency to dry up the milk of cows, but we have never found it true. Doubtless, if cows are let into an orchard, and allowed to help themselves to the extent of their stomach's capacity, they would eat too many, and the mammalian glands and all the viscera of the animal might be deranged, just as they would be from eating too much clover or corn. This effect does not militate against apples as food, any more than it does against clover or corn. The trouble is not in the apples, but in the injudicious mode of feeding. Fed sparingly at first, till the animal is accustomed to them and the keen edge of the appetite is dulled a little, they may be afterwards fed with impunity to any extent. Horses are extravagantly fond of apples, and will be tempted by them when grazing to come to the halter sooner than by the shake of a dish of oats. Of course, they will eat too many, if allowed the range of an orchard without some previous preparation for this diet. For six weeks past we have given our horses a liberal ration of apples daily, and at this moment they are grazing in an orchard where there are large piles of fruit, but they do not eat them to excess. When turned out in the morning they make for the apples the first thing, and when satiated go to grazing. Their hair and everything about them indicates health and thrift.

Sheep are especially fond of an apple diet, and are greatly benefited by it. We called on a neighbor this week who is celebrated for his production of good Durham beef and Cotswold mutton, and we did not wonder that his beef and mutton were tender, juicy and well flavored, when we saw the piles of apples laid up for feeding the Durhams, and his flock of Cotswold enjoying the free range of his orchard, in which apples literally paved the ground. We do not suppose the fat flanks of the sheep were wholly due to the apple diet they were enjoying, but that this made a good food in connection with grazing there can be no doubt. We spoke for a quarter of the next lamb our neighbor should slaughter, and expect to find it fat and well flavored.

Our correspondent wishes to know "as definitely as possible how much apples are worth for feeding." There is as much difference in apples as in other folks, as Mrs. Partington says. A ripe apple has much more virtue in it than a green one, and the different varieties differ greatly in their nutritive value. Thus, a fall pippin has more substance in it than a gilli-flower. Prof. Salisbury studied up this subject of apples very thoroughly, and give the results of his investigations very fully in the transactions of the New York State Agricultural Society, vol. 9, to which we refer H. C. P., and others specially interested. The conclusion to which the Professor came may be summed up in the following:—"The apple, if of good quality, may be regarded equally, if not more, rich in fat-producing products than the potato. The apple is also richer in nitrogenous or flesh-forming products, and its inorganic constituents are peculiarly valuable." This is high testimony and high praise to the feeding virtues of the apple, and we doubt whether most practical farmers will subscribe fully to this theory.

This subject was also discussed at the country meeting of the Massachusetts Board of Agriculture, at Worcester, in the Autumn of 1876, when T. S. Gold, a gentleman of large experience and wide observation, read a paper on apples, in which, after stating that Prof. L. B. Arnold estimated the value of this fruit for milch cows at 12 cents per bushel, he went on to say:—"From my own experience in feeding thousands of bushels,

not only as falling from the trees, but gathered in the barn cellars for Winter stores, for neat stock, horses, sheep, and swine, I would place their value nearly as high as does Mr. Arnold. The sweet and firm-fleshed varieties would, of course, be preferred, but a mixture of sour ones need not be feared. The possibilities of yield of an orchard are such as to make its value for stock-feeding alone take the very front rank among cattle foods. At the very moderate yield of 10 bushels per tree, 40 trees per acre, we have 400 bushels, at 1 shilling per bushel, amounting to \$50 per acre, in addition to the crop of grass for pasturage."

In the discussion which followed the reading of Mr. Gold's paper, Mr. Perry, of Worcester, who is spoken of as one of the most sensible and level-headed farmers of that county, said:—"This question is one that interests most of us. I keep a large stock of cattle; I have a large quantity of cider apples, and I have fed them to my cows regularly. I have given my cows about half a bushel daily, and I think that those apples are worth 12 cents a bushel, as we are selling milk now in the city. Instead of selling apples at 8 cents a bushel, I should give them to my cows, because they not only increase the quantity of milk, but they furnish nutriment to the cows, and, of course, they require less of other articles of food. In my opinion, a bushel of apples is worth, in my location, from 8 to 15 cents to feed the cattle."

Mr. Hicks, another practical farmer, said: "I have fed a bushel of apples a day to each of my cows for the last six weeks—half a bushel night and morning—and the quality of the butter is better. I know their feed has not been as good as it was previous to feeding the apples, but the butter is better—its flavor is better. I am satisfied that apples not only increase the quantity of milk, but improve its quality also."

Here we have the united testimony of the professors and practical farmers that apples are worth from 8 to 15 cents per bushel for feeding purposes. That there is more virtue in them than is commonly supposed we do not doubt. They are often spoken of as watery trash, but the per cent. of water is only a little more than in fresh beef, and less than in many vegetables that are highly esteemed for feeding, 1000 pounds of fresh apples containing, as the average of several analyses, 170.4 organic matter and 2.6 ash or inorganic constituents. This inorganic matter is rich in hair and bone producing material, the ash of an apple yielding 1-14th per cent. of phosphoric acid, 2 1/2 of phosphate of iron, 42 of potash, and nearly 20 of soda. It would be exceedingly desirable if farmers and all men would eat more apples and furnish more for their families, as well as feed more to their stock. There is not only bone and brain in an apple, but there is health and elasticity of spirit. The 2 1/2 p.c. phosphate of iron found in the ash of an apple makes it a tonic of no mean value, and the acid (malic) of the apple is more congenial to the stomach of most people than any other vegetable acid excepting grapes. The fattening constituent is chiefly sugar, of which on the average there is 8 per cent., the amount varying but little in sweet and sour apples so that one is just about as good for feeding as the other. We can see but little difference in the relish with which they are eaten by stock.

Our correspondent asks whether apples should be fed cooked or raw. We formerly cooked apples for swine, but have not done it for years. Cooking drives off the volatile aroma of apples, and of most fruits, and we prefer to eat them ourselves and feed them to stock uncooked. For a change it may be well to cook them sometimes, but cooking costs something, so we prefer to make a change of food for stock in some other way. We can't forbear to say in conclusion that in this year of plenty we hope every farmer will make a thorough trial of the virtues of apples for feeding stock, and will lay in a bountiful store for family use.—[N. Y. Times.

A Young Shepherd.

Among the entries of the late New York State Fair, says the *Husbandman*, were some sheep bred by a lad who a few years ago started his flock with a ewe purchased of his father. He has bred his sheep with great care, securing the use of high-bred males, and has now a flock of twenty-three head of first-class sheep, which sheared the present season six pounds each of washed wool, which brought him something over \$40. He has his flock of sheep and \$125 at interest. The money was derived from the sale of lambs and wool.

American Association of Shorthorn Breeders.

The Lexington *Live Stock Record*, in referring to the coming meeting of this Association, makes some very appropriate remarks on the importance of this subject to breeders. He says:—

This is a very important assembling of the Association. At it, the officers, from President down, for two years are to be elected. Hotel and railroad charges are to be reduced to members attending.

There never was a more important period in the career of shorthorns in America. The now existing and increasing demand for American beef in England, the annual increase of our own population, and the decline in the relative consumption of pork in all its shapes, bacon, hams, salt pork, &c., accompanied by an increased relative consumption of beef by our people, all indicate a great increase of feeding cattle. The merits of the shorthorn, and the large number of breeders of shorthorns show that they are the only cattle now able to meet this increase of demand for beef. For months the export of live cattle from America to England has exceeded 1,500 a week, and as an average of 1,000 of American cattle have during those months been offered and sold every week in the London Metropolitan market alone (one market only), and all this beside the dead meat exported from America and sold in the dead meat market of that city. This live cattle export originated only last spring, and it is already in amount equal to one-third of all the live cattle sold in all London, English, Continental and American, all together.

Such is the present state of this great cattle and meat traffic in America for England. Its future no man can predict.

This American Association soon to meet is the representative in a combined form of the great shorthorn interest in the country. There has never been in its existence a year so important for its assembling as this one, and out of it should come great good to the interests and the capital engaged in producing shorthorns which it represents.

Turnips for Cows.

Mr. Nathan Hart, at a recent agricultural meeting in Connecticut, in advocating the use of turnips for feeding milch cows, said: "A few winters since I was feeding common turnip, and when the supply was exhausted I had the curiosity to estimate the value of turnips per bushel for feeding purposes from the returns that I actually received from the milk. We were then getting 6 cents per quart for our milk. The diminished flow of milk resulting from its discontinuance shows that turnips were worth 25 cents a bushel to feed to cows. I refer to the common flat or field turnip. But as to their saving hay I do not think they do. I think they act as an alternative, and their use will cause the cow to more perfectly digest her food. It seems to be adapted to the wants of the cow, and produces a good digestion. I feed just before milking."

Mr. Hart practiced feeding the turnips just before milking at night. Immediately thereafter the last feed for the day is given. He could not find that they induced any bad odor in the milk, but thought it important to begin feeding them gradually and to slowly increase the amount to the full feed, and also important to feed just before milking.—[N. Y. Evening Post.

The Best Cow for Small Farms.

Our opinion and also that of the principal dairy-men of the country is, that the Jersey, commonly called Alderney, is above all others the best cow. They are easily kept, very docile—a point not to be overlooked—and beautiful, give milk of superior richness, from which is produced finely colored, solid butter, having an equal texture and flavor. Butter made from such milk has been known to keep when placed in a dry, not cold, cellar, without the use of ice, and when taken out was in a hard, firm condition, and was then sold 12 to 18 cents per pound higher than best ordinary butter.—[Live Stock Record.

Henry Milward & Co., brokers of Chicago, in their eighteenth annual report in regard to the prospects of the coming season's supply of hogs and corn, say that it is generally believed that there is an increase of fully 20 per cent. in the hog supply, while the corn-crop will be the largest ever known.

Keeping up the Standard—How it is Done.

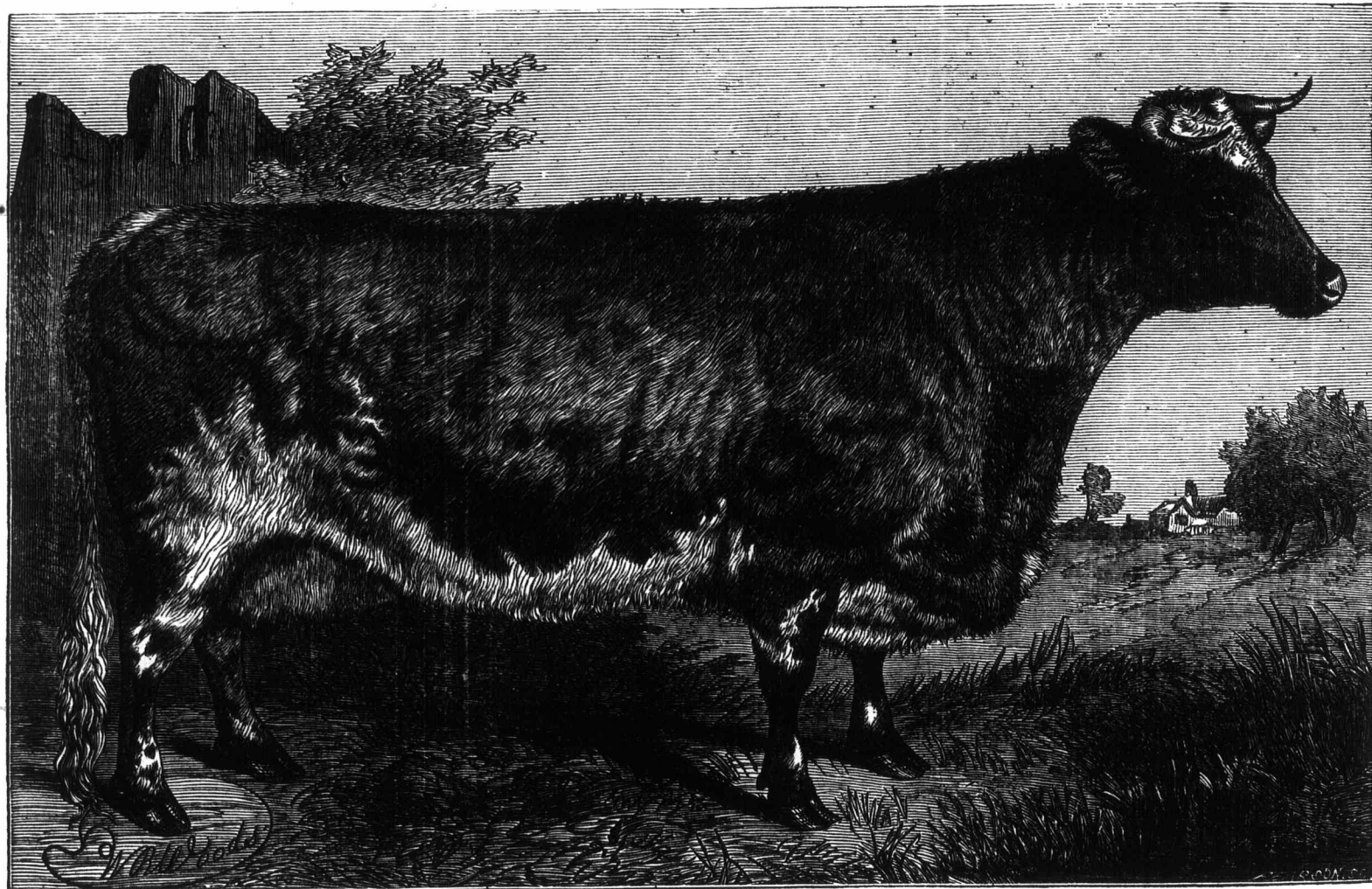
What guarantee has a young breeder that, if he buys nice animals with pedigrees that are reputed to be good, he can keep the standard up, and continue the improvement?

T. L.

If the wish is to breed Shorthorns, the beginner will be very careful to procure those that are altogether Shorthorn in blood. If he incline to breed and domesticate the Antelope deer or the wild goose, he has a guarantee that either of these will duplicate itself with unerring certainty. It is not difficult to answer why this is so. It is the long-continued breeding in a line, and in proportion as the progenitors have been of fixed unvarying type, in that proportion will the duplicates be uniform, like the parents, the precedence being due to those longest bred alike. This is a law which you can neither ignore nor turn aside, and no one should attempt to rear the better styles of farm animals if he be not possessed of sufficient intelligence to divest himself of prejudice, and follow a

formity, and its young grows, looking as like each other as so many grains of wheat. But notwithstanding the higher types of all improved animals are quite deeply fixed, and are bred by some men in such manner as to keep well ahead of the plainer kinds, the novice at the difficult art of breeding is apt to be captivated by appearances, and may go far astray. Some high grades are very attractive, inclined to fleshiness, thick, and well packed in all the essential parts. A low-bred thoroughbred may be very captivating, but eight times out of ten, may prove valueless as a getter to those whose aim is reasonably high up. The uniting of family peculiarities through the male and female line in a herd, to the end that changes will mean improvements rather than steps taken backward, is not in the power of a mere beginner to do, solely on his own fancies. Hence it is of the utmost importance to him to use such blood as has proven of high value, regularly, either through the individual himself, if he be of suitable age, or otherwise through the reputation of the herd from which he has been obtained, and more than this, the reputation of the particular strain of blood to which he belongs, wherever formed. — *Western Farm Journal*.

cold and put on any extra fat. Young farmers who start on limited capital, and have to depend principally on their brains and muscles to enable them to make a profit on their farming, have to wait until the future for well-built handsome barns and other outbuildings till the farm has returned enough profit to warrant such an outlay. But this fact should not prevent an effort being made to provide winter shelter for the cows and other stock. Against the side of the barn, in the barnyard or some other convenient enclosure, or against the high board-fence which may enclose one side of the barnyard, build a skeleton shed by planting crotched sticks (timbers) obtained from the woods. In these crotches lay other timber sticks strong enough to bear considerable weight. On these lay old rails about a foot apart. You now have your skeleton shed and require the roof, which is made with corn fodder neatly piled on the rails six to ten or fifteen feet thick. This makes an excellent protection, at the same time having the fodder in a convenient place for feeding during the winter. If the fodder has been placed properly so as to shed the rain, but little of it will be damaged. By making the shed deep and not too high — merely high enough for a man



line of action either laid out by himself or by some one competent to do this difficult thing.

We take this occasion to say that the notion that the outward form comes from one parent, and the internal structure and constitution comes from the other, has no foundation in reason nor in fact. These heresies are founded upon a shallow conception of physiology, and of the laws governing the perpetuation of animal life. The animal longest bred in a line, the outward form of the ancestors having been like the immediate parent, whether the sire or the dam, will be the one that will, four times out of five, largely determine the make-up of the progeny. If the parent which excels in these particulars excels also in constitution, the relative preponderance will be still greater. Going out for new blood to cross with is one of the ways in which beginners scatter shot and miss the mark, because they do not sufficiently study the needs of the herd, nor do they go back in their investigations as they should. Like will not beget like unless, as hinted, the type takes its origin far back, and has been noted for its uniformity through its immediate family, and for its tendency to crop out in all the outgoings of its blood. Any novice can breed the deer or any other wild thing which always produces with uni-

Grand Duchess 17th,

whose portrait we present to our readers this month, is one of the most noted Shorthorn cows in England, not alone on account of her high breeding and wonderful development of flesh (whilst in her prime her shape was about perfect, conjoined with great style and character) but more particularly as a breeding cow having produced in eleven years eleven living calves, six heifers and five bulls, the latter selling at very high prices, and are being used in some of the best herds in England. Her measurement when in breeding condition was: height 56 inches, width of loin 20 inches, hips 25 inches, length of quarter 21 inches, and girth 85 inches.

She was purchased by Capt. Oliver for about \$4,500 in 1867 at the Preston-hall sale. Her sire was the American-bred exported Oxford bull "Imperial Oxford" (18084).

Cheap Sheds for Stock.

To realize the best returns from all kinds of stock it is absolutely necessary to shelter them well, else it will take much extra food to keep them to the proper degree of heat to resist the

to walk under at its lowest place — and built against the south or warm side of the building or fence, the animals will have a comfortable place to winter under. They can go under at pleasure by having it open in front, and during mild days can be fed in the barnyard, while in stormy weather the shed can be used. We have seen temporary pig-pens thus made, and they answer admirably, being warm and comfortable; and also colts wintered under just such sheds, and they came out in the spring as strong and hearty as could be wished for. — *D. E. in Ohio Farmer*.

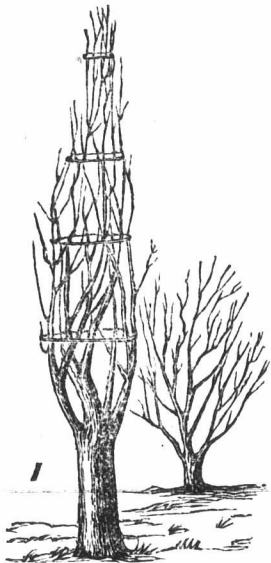
The Australian wheat, sent out by the Agricultural Department about four years ago, is described by J. D. P. of Petersburg, Va., in the *Country Gentleman*, as a large, plump berry, rather soft when first sent here, but has hardened very much; stalk very stiff, and stands better than any other known. The leaves and head are of a bluish-green. It yields here this year about twice as much per acre (sowed the same day, in same soil, side by side) as the Fultz. Can be had there for about \$3.50 per bushel by the five to ten bushel lots,

Garden, Orchard and Forest.

Seasonable Hints—November.

BY HORIUS.

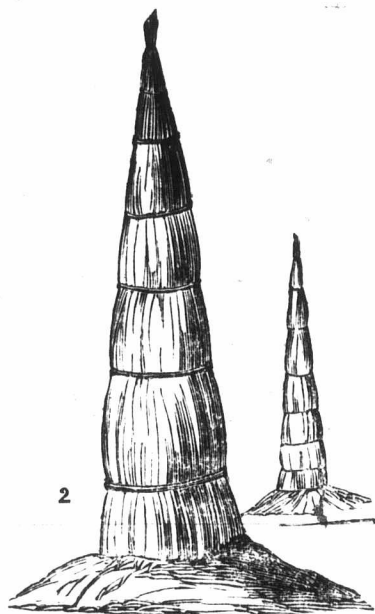
PLANTING.—Much is said for and against fall planting, but the remark aptly applies that it is not so much the season that success depends upon as the fact that careless and indifferent planters do not succeed well any season, or when all the elements combined to ensure success are in their favor. In the principal fruit-growing districts, in the southern and western portions of the province, or where winter-killing does not prevail, fall planting may be practiced with every success, for at this time of the year the soil is generally drier and in better condition, and can be plowed and prepared at less cost than in spring. Having the ground drained, no risk is incurred if the usual conditions of planting are complied with, such as digging the holes large enough to receive the roots without bending, spreading them out with the hand carefully so as to come readily and evenly in contact with the fine soil thrown in amongst them, finishing off by treading firmly and placing a mulching on top well over the disturbed earth—not a miserable forkful or two, but a good, heaping half-dozen, neatly placed around the tree. Staking is indispensable, and speaking of that, attention is directed to remarks and illustrations given in the Sept. No. of the ADVOCATE, showing the evils of not staking and the benefits from so doing.



It is now too late for handling the general run of evergreens, nor would we advise the late planting of the silver maple, vines or roses, but chestnuts, elms, and the ordinary line of deciduous trees, particularly the larch. Extra large specimens of pines and spruces, to be planted for effect, may be safely removed by digging a trench around the roots and under them, leaving a ball of earth attached. This should be left till hard frozen, when the tree and all attached may be taken to where it is required to be planted. Of course the holes for them to be planted in would have to be dug before the ground freezes. Attention is directed to the French method of training apple trees or other fruits in the October No. of the ADVOCATE; this system would be particularly applicable to those sections of the country where fruit cannot be grown in the ordinary way, or where the trees are killed back to the snow line, as in Muskoka and north of Ottawa.

PRUNING should be done now as much as possible; no limb should be cut off a fruit tree larger than a man's wrist, unless dead. When a branch

attains the diameter of four inches at the juncture with the main trunk, it will be folly to attempt to cut it off; better far to leave it on, no matter how inconvenient it has become, and trim off smaller branches and shorten in the ends. Scraping off the old bark will get rid of countless insects; doing this will lay bare their hiding places, and expose the larvæ to the tender mercies of "Jack Frost." Gooseberries and currants hardly ever get the requisite care in cutting back and thinning out that the production of good fruit, and plenty of it,



demands. So, do not spare the knife and spoil the plant. Grape vines should be pruned and pegged down. Vines trained to the stake require the side branches or laterals cutting back to one bud, leaving two or three of the strongest canes of this season's growth, and these shortened back to about four feet. Those grown to trellises need the two-year-old wood cutting back, leaving this season's canes to bear fruit next summer. Many persons fond of grapes are deterred from cultivating them by the fear of some great mystery or art being connected with the manner of training the vine. A little determination and study on their part of the habits of the plant will make them as wise as they could wish to be.

PROPAGATION.—Cuttings may be made and planted now of currants, gooseberries, willows, poplars and many of the flowering shrubs. Make them of good ripened wood, about ten inches long; plant them in a trench, leaving a bud exposed over ground; they should be well mulched after planting. A day or two devoted to this work will be well spent. Trimmings of the grape vines may be buried in the soil or kept in a cellar till time can be spared to make up into cuttings. Tied up in

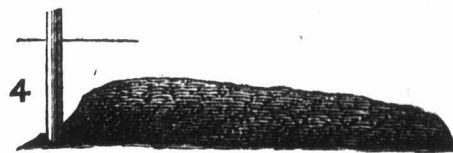


small bundles and packed in sand, they will be ready for planting at the proper season. Cions for grafting apples, plums, &c., should be gathered before severe weather sets in, and packed away in sand or sawdust. Seeds and nuts of all kinds of fruit and ornamental trees should be sown now, if not already done. Sow thickly in shallow drills two feet apart, sandy soil preferred. Place a thick coating of horse manure over all. Mulching is the

whole key to success. Asparagus seed does well sown in the fall. To have a permanent bed of this delicious esculent sow the seed thinly in ground well trenched and heavily manured; have the rows about eighteen inches apart and the bed say four feet wide. To have large stalks of rhubarb divide and replant a portion of the old bed in soil well enriched.

PREPARATIONS FOR WINTER.—This will be the most important work of all during November, and the careful man will be on the alert for fear of being caught napping. Weather prophets are not reliable. You will find it more profitable to be prepared than by paying attention to fine weather prophecies. Examine all drains through the orchard and garden, and open up surface drains in low places. Collect any litter or leaves to be had for the careful covering of beds and borders. Raking off the leaves, &c., on beds of shrubbery, roses, evergreens, &c., is not a good plan, though done for purposes of order and neatness. It has an injurious effect on the roots of the plants. It would be better to throw on a few inches of soil, covering any litter up, and when forked in in spring would materially enrich and improve the growth of the plants.

Peaches, quinces and other half-hardy trees may be easily protected in the winter by the way here illustrated. In fig. 1 we have the tree or bush tied up with willows or rope ready to receive the covering. For this purpose rye straw is the handiest or neatest, but corn-stalks or old mats would answer. Standing the straw upright around the tree on the ground, the first layer may be tied in position; next the second layer, and so on till all is completed—looking like fig. 2, a task of five minutes. For the protection of roses, raspberries and grape vines we show the plant pegged down in fig. 3, finally covering over with earth, throwing up in a mound-like form, and patting it smoothly with the spade, as in fig. 4. If the ground should be frozen before this is done, use dry manure or straw. Cover strawberry beds with evergreen branches.



Tender plants, as L'Entanas, Heliotropes, Cannas and Salvias, may be kept by those not having a greenhouse, in the cellar, or some warm, dry place in the dark. Dahlias, Gladiolus and Tuberoses require keeping in a warm, dry place on shelves, or packing away in boxes in dry sand. An occasional inspection in the winter will be necessary to see how they are keeping. Monthly Roses, Geraniums, and other plants intended for window flowering, require special care during this month, that is, those which have been lifted from out of the beds; they require severe cutting back and potting into nice rich soil. Keep plants damp while handling, and put them in a cool, shady place for a few weeks; from this they can be brought into moderate light and heat. Water sparingly till new roots are formed.

Leaves as Fertilizers.

Pine leaves are less than one-half as valuable for fertilizing purposes as the leaves of deciduous trees. The leaves of deciduous trees retard the process of decomposition when mixed with manure, and are often used for this purpose in hot beds. Pine leaves would promote decomposition by favoring the admission of air sufficiently to hasten the process. This, however, does not indicate that they possess value as a fertilizer superior to deciduous trees.—Springfield Union.

Currants.

BY E. M., DRUMMONDVILLE, ONT.

When there is a short crop of raspberries, currants are a profitable market crop.

If the worms attack the foliage, so much the better for the grower who has sense enough to use hellebore. Very often they manage to live and produce some fruit when planted in a fence-corner. It would be much better, however, to plant them where the cultivator and hoe could and would reach them frequently. Manure with currant bushes is always in order.

To prime them a pair of grape sheers and some common sense are useful.

The Cherry is a very large and handsome red currant, but probably not so profitable as smaller varieties. The Red Dutch has been considered the most valuable of the reds, but it drops its leaves, in season and out of season, upon the slightest provocation. The Ruby Castle retains its leaves till November. At this date (Oct. 18), it is in full leaf, while all the other varieties, except the Blacks, have been bare for weeks. It is quite distinct from the Red Dutch, though its fruit differs but little from it. I fancy that it has larger bunches and better and somewhat larger fruit. As it holds its foliage, the fruit ripens perfectly, and will remain for a long time on the bushes, i. e., if the robins give their consent. During the present I sold Ruby Castle currants for 10 cents per quart, with demand for a much greater supply.

White Grape currants are very handsome and of superior quality, but not very salable. The bush is a slow grower.

The White Dutch is a handsome grower, but the fruit is inferior.

The demand for black currants has seemingly increased greatly of late years. Four years since there was a great demand for Black Naples, which were not obtainable in Canada or the United States. At the present time there is an abundant supply at reasonable prices. The Black English is superseded by the Black Naples. A variety still more productive than the latter is needed, and Lee's Prolific professes to meet that requirement. Whenever a mere qualification in any kind of fruit is demanded, a patriot forthwith springs to the front with a new variety, possessing the identical peculiarities demanded, with a large modicum of general excellence as well. Supply follows demand, and demand follows supply, for demand follows supply, for these patriots demand pretty tall prices, and sometimes deserve them. New fruits are never still-born, but most of them have very short lives.

Keeping Grafts Through Winter.

Nurserymen who cut large quantities of grafts late in autumn keep them in cellars packed in damp moss; but farmers and others who wish to preserve a few for spring grafting may not have these appliances at hand. For such, a simple and perfect mode is to bury them in a dry place out of doors, in an inverted open box. Fill the box partly full with them, nail two or three strips across to keep them in place, and then place the box in a hole dug for the purpose, with the open side down, and bury them half a foot or so in depth. They do not come in contact with the earth, and remain perfectly clean; and the moisture of the earth keeps them plump and fresh without any danger of their becoming water-soaked. Grafts which have become shrivelled by exposure are thus restored and will grow. It is often advantageous to cut grafts in autumn, as there is then no danger of their vitality being lessened by exposure to intense cold, and it is often more convenient to cut them or procure them from a distance at this time. In making the labels with a lead pencil, remember that if the wood is wet before writing the names will last ten times as long as if written dry.—[Colman's Rural World,

Late Transplanting of Trees.

It sometimes occurs that it becomes necessary to transplant trees late in the season, or after the buds have swelled, or new growth commenced. This can be done quite safely if due caution is given in protecting the roots from light and air. In removing trees or small shrubs after growth has commenced, we have a watering-pot full of water near by, and as soon as the tree is dug up, the roots are re-sprinkled until every one is thoroughly wet; then the earth is scattered over all the large roots and small fibres, thus preventing them from being affected by the light, as well as becoming dry while being packed up or removed from one part of the grounds to another. A portion of the branches is also removed, and usually it is best to do this before digging up, because the pruning can be done much more systematically and readily while the tree is fixed in the earth than afterward; besides, it lessens evaporation in proportion to the number of young shoots and leaves removed. Trees and shrubs of moderate size may be removed quite safely even after growth has commenced in spring, if these precautionary measures are strictly followed. Where trees have been left heeled in until growth has commenced, the roots may be puddled as taken out—that is, dipped into a solution of earth and water of the consistency of thin mortar. This should always be done when trees are to be set out on a windy day, for a moment's drying will frequently make one-half difference in the growth the first season, even if other conditions be favorable.—[Rural New Yorker.

Protecting Trees Against Worms.

The bandage system, which we were the first to suggest some twenty-five years ago, and have often referred to since, is the only effectual protection we have yet seen against the operations of the worm in fruit trees. We repeat again that in not a single instance have we ever had a worm in our dwarf pear trees where this was properly attended to. It is simply to bandage the bottom of the tree with any kind of muslin or cloth, and tie it, letting the bandage be about six inches above ground and two inches below. It should be applied as soon as the ground is in a fit condition to go upon. These bandages should be removed at the end of October, but it will do no harm to let them alone, only that they remain in good condition for another season. As long as this is continued we defy the worm. The beetle lays its eggs an inch or two above the ground early in the spring, that is as soon as the warm days in March will admit of its coming forth from its winter-quarters, the eggs are soon hatched by the sun, being laid on the sun-side of the trunk, and the young grub finds its way down to the soft bark beneath the soil where it gradually works its way in. The bandage prevents both the laying of the eggs and the descent of the grub. Let doubters try it. One man will bandage two hundred trees in a day. It may also protect the peach tree in the same way.—[Germantown Telegraph.

Trees and Rainfall.

From some observations by M. Fautrat relative to the comparative influence of leafy woods and resinous woods on rain and the hygrometric state of the air, it appears that pine forests have a much greater influence on the hygrometric state than others; so that if the vapors dissolved in the air were apparent like fogs, we should see forests shrouded in a large screen of moisture, and in the case of resinous woods the envelope would be more pronounced than in that of leafy woods. M. Fautrat also shows that pines retain in their branches more than half of the water which is poured upon them; whereas leafy trees allow fifty-eight per centum of the precipitated water to reach the surface of the ground. He suggests, therefore, that in planting with a view to oppose inundations, it would be advisable to choose by preference resinous trees, as offering a better covert.—[N. Y. Post.

To Increase the Calla Blossoms.

To obtain two flowers instead of one from every flowering sheath of calla-lily:

As soon as the joint flower is cut or begins to wither, pull the stalk down through the open sheath clear to the bottom. At the bottom will be found, standing close to the stalk, another bud, enclosed in a delicate covering; cut the old stalk away as close as possible, without injuring the bud, and if it has not been kept back too long it will grow up quickly.

Hints for Winter Gardens.

Select if possible an east or south window. Our days are short, plants need light, and as we can give them at best only a few hours of light, it is important that there should be as much of brightness and warmth in it as we can furnish. If an east or south window cannot be had, then a west one is better than a north.

The room should be one where the night temperature does not fall below 40°, and not maintained much above 70° by day; also it should be one not usually occupied by the family in the evening, for at night we draw the curtains, stir up the fire, light the lamps or the gas, and increase the temperature several degrees above the average temperature of the day. But plants require that when daylight fades the temperature should decline. Night is their time for rest, but they cannot rest if the temperature be as high or higher than it was through the day. The effect is similar to that produced upon a human being by depriving him of his wonted sleep.

Arrangements should be made for giving the plants fresh air whenever practicable. The most convenient way is to have the upper window-sash movable; let it down at the top, taking care that the plants do not stand in a draught of cold air, and admitting it in quantity proportioned to the weather outside—when it is cold and frosty, very little or none at all, and more when the weather is moderate.

The leaves of plants need washing in order to remove the dust that gathers on them and fills up the pores. Geraniums and like hairy and soft-leaved plants are best washed by taking them to the sink and syringing them thoroughly through a fine rose. Glossy-leaved plants such as Camellias require to have the leaves sponged off one by one. In all cases soft and tepid water should be used. The washing should be done often, say once a week.

In watering use tepid water, and learn the requirements of the plants so as to adapt the amount to their need. An Ethiopian Lily will rejoice in water that would kill a Cactus.

The drainage of the pots should be perfect so that surface-water can escape through the hole in the bottom. If the pots stand in saucers, pour off the water that runs into them, and not let it soak into them again. Yet this rule, though of very general application, need not be observed in the case of a aquatic plants.

A very common error in window-gardening is that of attempting too much. Too many plants are crowded into the little space at command, so that it is impossible give each the light and air it should have. Again, plants of too diverse character are brought together. It is no uncommon thing to see tropical plants and those from the temperate zone, if not even Alpine plants, all crowded into the same window, and subjected to the same temperature and treatment. Better far to have one healthy and well-grown plant that will yield its flowers in perfection, than a dozen sickly, feeble, wretched plants, that have no beauty either of leaf or blossom.—[Fruit Recorder.

Currants.

The *Floral and Fruit Magazine* says:—

"You can have fresh currants several months in this way:—In Germany currant bushes are trimmed up with one stalk in regular tree shape. As soon as the currants are ripe—not dead ripe—they take nice straw and make stacks over the bushes they wish to preserve, tying the straw at the top in a pointed shape to shed water, and not having the stack so thick as to exclude the air. If they cannot get the straw, they take old clothes and tie over the bush, drawing them close around the bottom. Last October I picked delicious currants from my bushes, merely protecting them in the latter way."

In this connection we may remark:—It has long been a practice with those who wished late currants to plant the bushes at the north side of a tight fence or under the shade of trees, giving them some liquid manure during the season of growth. When they are wished to be kept very late, we have found it a good plan to compress and tie the bush in the shape of a cone; tie a bundle of rye straw next the tops, spread and place over the bush to shed the rain from it, but not so as to entirely exclude the air.

Agriculture.

Live-stock and Wheat.

BY PROF. MANLY MILES, LANSING, MICH.

The remarkable differences in the yield of wheat per acre in 1877 in the leading wheat-growing counties of Michigan, as shown on a map prepared in the office of the Secretary of State, have led me to study the conditions that have apparently determined the variations represented in the census statistics, and trace their relations to the well-established principles of farm practice.

In themselves the statistics are incomplete and unsatisfactory as they fail to state the number of animals in each locality to each 100 acres of improved land in farms, and the proportionate area of land under cultivation that is devoted to wheat—the two elements of the greatest importance in solving the problem under consideration.

As the required data are not furnished in the census statistics of 1877 I have compiled them from the previous census of 1874, which, although not, perhaps, representing the facts required in 1877, are the best approximations to the truth within my reach.

In discussing the materials at command I have arranged the results in the form of a diagram, which exhibits the yield of wheat per acre in each county in 1877, together with the number of acres of wheat in 1877, and the number of cattle and sheep in 1874 to each 100 acres of improved land in 1874.

In this diagram the relations of the yield of wheat per acre to the number of cattle and sheep to each 100 acres of improved land is shown in the most striking manner.

The counties that have an average number, or more, of cattle and sheep—with two exceptions that may be readily explained by local causes—have more than an average yield of wheat per acre, while those that have considerably less than the average number of cattle and sheep have less than the average yield of wheat; and in the latter class of cases an increased acreage of wheat has the effect of diminishing the yield of wheat below what might be expected from the small numbers of live-stock.

These results, although surprising from their uniformity, were not unexpected as they are in accordance with principles of farm economy that are recognized by all intelligent farmers.

In a country where commercial fertilizers are not in general use the supply of barnyard manure must furnish a fair index of the fertility of farms that are nearly equal in natural productiveness, and the proportionate number of cattle and sheep kept on the farm will best indicate approximately the quantity of manure at command.

The acreage of grain must also have an influence on the results. An excess of grain without a corresponding supply of manure and high tillage must tend to produce a diminished yield per acre, while with a liberal manure supply the yield of grain may be retained at a high average, even with an increased acreage.

Success in wheat-growing seems therefore to depend largely upon the attention given to live-stock, and the statistics under discussion agree fully with the old-time saying, "The more cattle the more manure—the more manure the better crops."

South Australia has this year produced an enormous crop of cereals, but there is a difficulty in harvesting, owing to the scarcity of labor. That the crop may not go to waste, the Government has offered, through Sir Arthur Blyth, the Agent General in London, a reward of \$20,000 to the American inventor who shall produce the best machine for reaping and cleaning wheat.

Wheat and Potatoes—Poor Seed—Fall Prospects in the United States.

We are in possession of reports of the fall crop in the States. The general tenor is a greatly increased area of fall wheat, with the present promise of the crop not favorable on the whole. We cannot, it is true, speak at present with certainty of a crop that has so long a time to recruit any present deficiencies, but all are desirous to know what even the earliest promises may be. From the *Country Gentleman* we take the following communication on the subject from a correspondent in the State of New York:—

The dry weather continues, and the result is that wheat has that hard, bare look which indicates a poor crop. There is less injury from the fly than last year; but the plant with few exceptions is making a slow growth and is not stooling out as usual. Part of this failure is probably due to defective seed. So far as I have noticed wheat from seed of 1877 is looking better than that of the new crop. I am afraid that this defective seed will extend its bad results farther than to injure the fall growth. Last fall the wheat plant was so much eaten by insects that the centre stalk was destroyed. What grew afterwards were side shoots, producing short and imperfect heads. Everywhere we hear complaints that wheat is not turning out well. Even where there is a large growth of straw the poorly filled heads disappoint at threshing time. The result of sowing such wheat will probably be very like that of planting corn from ears grown on suckers. In every crop of wheat we probably get a large part of the grain from these side shoots, and all is sown indiscriminately. This year instead of being in part the product of central stalks it is all from the secondary shoots which grew up after the first of last November.

Another crop which this year is failing extensively from defective seed is potatoes. In no other way can I explain the wide-spread and almost universal failure everywhere reported. I am afraid that the seed of our potato crop, even of the productive varieties, has become impaired. New varieties do not retain their prolificacy. It is partly owing to the ravages of the potato beetle, and sometimes doubtless to the bad effects of Paris green on young and tender vines. I have heard of and seen so many examples of this that I have no doubt of the fact. If the vine is young or has young leaves, the dilution of Paris green must be very weak or it will sear and burn the leaf. It does not matter how a potato leaf is destroyed. Anything which injures the leaf deteriorates the crop both in quality and quantity. Potatoes grown thus are watery and immature. Two or three years ago a neighboring farmer thought to head off the potato beetle by mowing his vines in July. What few potatoes he got were unfit for eating. All over the country it is such potatoes as these that have been used as seed. The result is that in many fields there are missed hills—sometimes as many as a third or a quarter of the whole. In other hills the eye started but the plant was spindling from the start. Unless we learn the lesson to save well-ripened potatoes for seed next spring, the experience of this last season will be repeated. One of your young correspondents predicts that potatoes will be worth \$2 per bushel next spring. I doubt whether they will sell as high as that with wheat and other grains as low as they are; but if he had said that every bushel of well-formed and well-ripened potatoes will be worth as much as two dollars to plant, I will endorse his position. Good seed was scarce last spring, and careful as I was I could have better afforded to pay \$2, or even \$3, for a bushel of superior seed than to plant some that I did. And yet most of my seed was very carefully selected. It sets a man to thinking when he digs one hill with 2½ to 3 pounds of potatoes, and right beside it another hill which will not yield half a pound.

With regard to prices of potatoes, the market has been steadily advancing for over a month. Shippers now pay 65c. per bushel for Peerless, and 70 to 75c. for Rose and other choice varieties. In Spencerport shippers have paid as high as 80c. per bushel for Rose. The Rochester market has been mostly supplied at 55 to 70c. per bushel; but the price must advance in Rochester or very few potatoes will be taken there.

Blasting Stumps and Boulders.

Dynamite among stumps and boulders remains a favorite subject with numerous correspondents, some of whom appear much confused as to the relations of dynamite with giant powder, while these are in fact the same thing, the former being the European and the latter an American name. It is of two grades—No. 1 and No. 2. No. 1 is not only more powerful but more explosive, and is not at all affected by water; therefore it is reserved for the very hardest work and for cases requiring long exposure to water.

Owing to the great difference in the capacity between the old and new powder, the novice in the use of the latter will be liable to overcharge, and while the manufacturer's sales are accompanied with as minute directions as possible, dynamite no more admits of definite rules as to the quantity required for blasting than do other explosives. Much must be left to the good sense and experience of the blaster; therefore the advisability of securing the services of an expert who shall either do the work or give instructions suitable to the location, character of the material to be blasted, the purpose of the blast and other circumstances that govern the quantity. The most favorable seasons for operating upon stumps and rocks are in the fall and spring. Where saving of time is an object dynamite applied by one who understands the business is a most valuable assistant, but it is recommended that any one ignorant of its nature and results should not attempt to operate with it. —[N. Y. World.

Cut or Ground Hay.

In some places hay is cut into inch and half-inch pieces and then ground, for the purpose of feeding cattle, horses, &c., in the belief of its adding to the nutrition of the food. We always doubted this theory, for the reason that hay fed in the usual manner performed all the offices of nutrition, as it was perfectly digested, and there was nothing more to be attained. But, in order to sustain our theory, we consulted an old, careful livery-stable keeper, who had many horses, and who, in a long series of years, studied the profit and loss in the various supplies for his stock. He said there was nothing gained in feeding cracked corn, but, on the contrary, there was a loss in the increased price demanded for it. Also, that cut hay was a loss to the extent of the labor, which was by no means a trifle. Good hay—and none other should be fed—is eaten up clean where not too much is given at a time. Oats should be fed whole, mixed with a little bran and moistened. He said he usually gave each horse in the evening a couple of ears of corn in the cob, and they were greatly relished. His horses were in the best of health, having lost but two by disease in thirty-years. —[Germantown Telegraph.

Experimental Farms.

We are pleased to note the increase in the number of experimental farms. Mr. J. Wrightson, for twelve years Professor of Agriculture in the Royal Agricultural College at Cirencester, England, will open, after Christmas, a private school for agricultural students. The farm selected comprises 534 acres of land, with a flock of 550 ewes and a dairy of thirty-five cows. It will be seen that the Professor aimed to have one sheep to the acre of land, which is the proper number in mixed farming.

A Word for Bone-dust.

I sowed two bushels of White Mediterranean broadcast on the 20th of November. I sowed one bushel and three pecks to the acre. I gathered 40 bushels from the scant two acres. There were three grains to the mesh and as high as 90 grains in the head. I used a small quantity of bone-dust and the increase of the yield of wheat was from 25 to 30 per cent. This fertilizer will increase the crop one-fourth, and under favorable circumstances will add 50 per cent. to the crop. One bushel of wheat will produce as much as two. All my grain was good. —[L. L. Dorsey.

Most kinds of insects are easily wholly destroyed, or their depredations materially checked by late fall plowing; especially the common white grub and the cut worm.

Clover and Chinch Bugs.

Horatio Sparks, of St. Cloud, Wisconsin, in the *World*, says:—From my experience with chinch bugs the last two seasons I am well satisfied that all grain fields if liberally sown to clover at seed time—say from fifteen to twenty pounds of clover seed per acre, salt at the rate of half a barrel, and plaster from 100 to 150 pounds per acre—no fear of chinch bugs need ever be entertained. The salt and plaster give the clover a heavy and luxuriant growth, so that it completely shades the ground, to the discomfiture of the chinch bug. It is a frail insect, and cannot flourish except in the sunshine and with the ground clean about the grain roots. The salt and plaster not only make twice the bulk of clover that would naturally grow without it, but add from 20 to 30 per cent. to the grain crop. The salt hardens and stiffens the straw, produces a rank growth, and prevents blight, rust and mildew, and destroys all grubs and cut-worms that come in contact with it. In 1876, I seeded three acres on one side of a ten-acre lot that was sown to Canada spring wheat with one bushel of clover well mixed. The result was, it completely occupied the ground. After the wheat and grass were nicely up I sowed one-half of the three acres with salt and plaster, mixed at the rate of two bushels of salt to 100 pounds of plaster. On the other land I sowed 200 pounds of plaster and no salt. The result was the half of field that was treated with salt and plaster was much better than the half treated with plaster alone. The clover on the first was much of it headed at harvest time and was a perfect mat. I cut it with a strong light reaper, called the Triumph, and one of the best machines, I think, manufactured. I kept the wheat from these three acres separate from my other wheat and threshed 80 bushels of No. 1 article. There was no chinch bugs on the three acres, while the other portion of the field was nearly destroyed by them, as were all my other fields that year.

In 1871 I sowed seed on all of my fields and treated all but one four-acre field with salt and plaster. The result was all the land thus treated produced a luxuriant crop of clover, a fine crop of grain and the finest possible pasture in the fall. In consequence of the last, my animals all got fat, and I had a fine coat of manure on my fields to plow under. On the four-acre field not dressed with salt and plaster the clover killed out in spots, and the wheat ripened prematurely in spots. On examination, I found these spots black with bugs. But, on the whole, I got a fair crop of wheat from the field. I hold, therefore, that clover is the sheet-anchor of success to the farmer in renovating and enriching his land, and salt and plaster compose the great balance-wheel that will crown all his efforts. I mix the salt and plaster on the barn floor in a box, at the rate of two bushels of salt and 100 pounds of plaster.—When mixed I put it in my wagonbox, and drive slowly over the field, apply the mixture from the rear of the wagon with liberal hand.

The Marquis of Lorne on Canada as a Field for Emigration.

The Marquis of Lorne is gazetted Knight Grand Cross of the Order of St. Michael and St. George. He made a farewell address to his late constituents in Inverary, recently, in which, after referring to home politics, he said that we should judge the wishes of the colonies not from our point of view, but from that of their interests, and also from that of the well-being of the whole Empire. He then spoke at length on the importance of Canada as an emigrant field for agriculturists and others similarly employed, and the rapidity with which the country is being opened and cultivated. Plenty of men would do well if they could hold a plough and follow the gallant example of their countrymen who had done glory to the old land in forming another great British nation. They would exchange unhealthy city toil for life-giving work. The settlers in the agricultural regions of Western Canada are likely to live longer and be happier than was the lot of a great majority of mankind. In conclusion, he had now to bid them farewell, but he wished to let them feel that he knew well how deep was the debt of gratitude he owed them. If he proved in any manner able to fill the high place allotted him—if any success attended him in undertaking the arduous responsibilities connected with the position of one who was the representative of constitutional sovereignty, and as such bound to cherish the living ties which unite the young with the old imperial land—if he

could in any measure satisfy the wishes of the people—it was because he had some experience of public matters as a member of the House of Commons. He had always rejoiced that he had been allowed to serve that fair portion of Scotland which their brothers and his served in other and more troubled days.

Furrow-draining.

As soon as possible after the wheat is sown, wherever the land needs draining make a series of clean deep, open furrows wherever tile-drains ought to be placed, being careful to provide a good outlet for the water to pass out of the field. On hilly lands liable to wash make furrows beginning in the hollows and extending them around the points of the ridges, giving them just enough fall to convey the water around to the highest points on the ridges. In this way the water will be scattered, as it were, instead of being concentrated at one point. Such furrow-drains will be beneficial in the spring by distributing the water that falls uniformly on the high and dry points. On very steep side-hills twenty paces apart is about the right distance. A side-hill plow is the most convenient to use in making them.

Phosphates.

At a meeting of the Western New York Farmer's Club, a member reported that he used 150 pounds of phosphate to the acre on a field of barley, and secured 47 7-10 bushels per acre, against 28 1-7 bushels where the phosphate was not used. In 1875, on two-rowed barley, he raised 42 3/4 bushels, against 25 5-6 on land not so manured. He believes in special fertilizers, and proposes the coming year to use 500 pounds sown broadcast on potatoes; then to mix 100 pounds with wood ashes, and apply in the hill. Another member said:—“We ought to know what we buy the special fertilizer for—if for potatoes, buy a fertilizer rich in potash; if for wheat, one rich in phosphoric acid.—*N. Y. World*.”

Farming as a Source of National Wealth.

The increase of agricultural wealth does not everywhere always take place in a uniform ratio. It follows laws of its own, which are eccentric as they proceed by shocks and starts. The rule is that the first generation of farmers, acting under the pressure of necessity, put forth their full powers. Their labors are stimulated and sweetened by the consciousness that they are making headway in the battle against rude nature, and the spectre of poverty vanishes from their homes amid general satisfaction. The next generation holds pretty evenly in the same course; but the conditions are different. The consciousness that the battle has been won tends to slacken effect. The war against the forest is at an end, and the necessity of improved methods of culture is not always felt in time, nor does the knowledge necessary to its application always exist. The enthusiasm that sustained the first generation gives place to occasional signs of *ennui* in the second. A desire to escape from the dull, unexciting life of the farm begins to be seen here and there. Meanwhile, the changed social position gives rise to new wants, to which horses, music, and better clothing are called upon to minister. The third generation, which now begins to be imperceptibly mingled with the second, is almost as much disposed to toy with the silver spoon as to handle the plough. The percentage of those who crave for some other occupation than that which the farm affords is visibly increased. The tendency to escape from the primitive employments will always exist, and the motive, however mistaken, will often prove irresistible. Trade, law, medicine, viewed from an uncertain distance, all offer counter-attractions where there was only repulsion before. The third generation sometimes dissipates the capital made by the two preceding, or transfers it to more hazardous spheres. At first, floating debts become troublesome; then they are funded in a mortgage, now the fate of the farm depends on the stuff of which the particular family is made; the mortgage may be cleared in time, or its amount may be increased, till at last the farm changes owners. In the latter case, a new start in the bush revives the old energy, and the cycle is again completed.

It is now not uncommon for farmers to sell their farms in old districts, while they are yet well off and invest the proceeds in farming in our

newly-opened West or in the more fertile portions of the Muskoka district, in which latter the population is said to have doubled within a year. A man with a number of sons, who can sell his farm for five thousand dollars, can in these new settlements obtain ample land as a provision for them all.

In different sections of the older settlements there is the greatest difference in the condition of farmers. The farmers in a rich Western country often have large sums put out at interest, while those in some Eastern counties are beginning to stagger under a weight of mortgage debts. But the two sections are in different stages of the cycle, which may work out varying details, as circumstances give the impulse. The fact that the accumulation of agricultural wealth is subject to checks does not prevent its general course being onward, or prove that amidst commercial distress there is not a large annual increase of national wealth. The tendency to capitalize is always greatest in the first generation of farmers; it slackens in the second, and sometimes comes to a stand-still in the third. But the three generations will be found to have among them, as a rule, created a large addition to the country's wealth.

Farmers, as a rule, capitalize a larger part of their earnings than most other classes. A farmer and a professional man make equal incomes; but while the professional man spends his whole income and often necessarily and unavoidably, the farmer adds largely to his means of reproduction. The man who spends relatively the larger part of his income in the cost of living does most for trade in the meantime; the man who spends the smaller part is conquering the leisure which affords opportunities of higher education to his offspring, or leaving to his descendants a capital-power by which labor can be moved and further material progress made. It is just when the farmer spends with the freest hand that he does most for trade; but when he kills the goose that lays the golden eggs retribution must follow.

As a nation, Canadians are becoming richer every year, in spite of commercial disasters, which are as the ripple on the surface of the water undisturbed beneath. It is well to look at the cheerful side of things sometimes; for moodiness may bring despair, and exclusive attention to one set of facts, while others are left unheeded, will certainly create a wrong and injurious impression. In the large sense, it is not true that Canada is a nation of bankrupts; it is rather a country in which wealth, widely distributed, is constantly increasing.—[*Monetary Times*.]

Who's to Blame?

On Friday last I chanced to be in the Corn Exchange at Exeter. Whilst there I heard a farmer—or at least I suppose he was one—ask a seed-merchant the price of trifolium. On being told 42s. per cwt. he looked quite astonished, and said, “How is it you are so dear; one of your trade offered me as good a sample as yours at 33s.” Now, Mr. Editor, how is this great difference to be accounted for? Did the 33s. lot contain doctored seed, or was the 42s. an overcharge? I grew several acres of seed myself this year, and I made 34s. per cwt. of it with lesals, and the merchant paid carriage, and he had to sell it again to the man who retailed it to the farmer, so that with the carriage from me to the wholesale man, from him to the retailer, and from the retailer to the farmer, and the two to get a profit, the 42s. was not a fraction too dear. Now if farmers must have cheap seeds they must expect to be cheated, for very few farmers are judges of seeds. If they find the seeds they get from their dealer to answer generally well—I say generally, as sometimes the best seeds fail, owing to climate or other causes—I should advise them to stick to him, and be willing to pay a good price for a good article, and not tempt a man to be dishonest by offering him a low price. I always buy my seeds cleaned from my seed-merchant. Before I adopted this plan I had no end of docks and thistles in my grass fields, but now I have scarcely any. There are few country seed dealers who have the necessary apparatus for cleaning all kinds of seeds, and those who invest their money and take the trouble—and a great trouble it must be—to clean their seed should be supported; the little extra cost is doubly repaid, even in the weeding, besides which a less quantity of seed will suffice. Who, then, is to blame—the man who acts dishonestly, or the man who tempts him? Will any of your readers kindly say, through your valuable paper, the price they have paid this season for trifolium?—*A Lincolnshire Farmer in Agricultural Gazette, Eng.*

Provincial Exhibition Prize List.

The two following classes were omitted for want of space in our last issue:

CLASS IV—HORSES.

For agricultural purposes exclusive of pure Clydesdales and Suffolks.

- Best Stallion, 4 years old and upwards, T. J. Bell, Londesboro. \$40
2d, T. & B. Snider, Waterloo. 30
3d, R. Ballantyne, Avanton. 20
Stallion 3 years old, H. Sylvester, Enniskillen 24
2d, Ed. Smithson, Weston. 18
3d, William Pherrill, Scarborough. 12
Stallion 2 years old, James Kitchen, Whitby, 21
2d, William Dobson, Malton. 14
3d, James Milne, Brooklin. 7
Yearling colt, J. M. Bell, Atha. 10
2d, George Wagg, Goodwood. 7
3d, J. Dryden, Brooklin. 4
Filly 3 years old, J. Little, Malvern. 18
2d, W. Crawford, Malvern. 11
3d, T. & J. Little, Sandhill. 7
Filly 2 years old, J. Torrance, Thistle town. 14
2d, Charles Shaver, Islington. 9
3d, William Smith, Columbus. 5
Yearling filly, Douglas & Wells, Aurora. 8
2d, William Smith, Columbus. 6
3d, J. Clark, Alloa. 4
Brood mare, with foal by her side, D. McCourachier, Orono. 21
2d, N. Taylor, Newcastle. 14
3d, William Crawford, Malvern. 7
Foal of 1875, Charles Shaver. 8
2d, Fleming Brothers, Eden Mills. 6
3d, J. Gardhouse, Highfield. 4
Matched farm team, geldings or mares, in harness, Joseph Brownhedge, Hornby. 20
2d, George Moore, Waterloo. 15
3d, William Crawford, Malvern. 10
Sweepstakes—Stallion of any age for agricultural purposes, T. J. Bell. Diploma and 50

CLASS V.

Heavy-draft horses imported or bred from pure imported heavy-draft stock on the side of both sire and dam, including Clydesdales and Suffolks.

- Best heavy-draft stallion, 4 years old and upwards, Canada-West Farm-stock Ass'n. \$40
2d, H. & R. Beith, Bowmanville. 30
3d, Douglas & Wells, Aurora. 20
Stallion 3 years old, T. J. Bell, Londesboro. 24
Yearling colt, W. M. Miller, Claremont. 10
2d, Thomas Blanchard, Appleby. 7
Stallion, any age, T. J. Bell. Diploma
Filly 3 years old, J. Gardhouse, Highfield. 18
Filly 2 years old, J. & D. Boaz, Ravenshoe. 13
2d, H. & R. Beith, Bowmanville. 9
Yearling filly, J. Davidson and Son, Balsam, 8
Brood mare, with foal by her side, J. Davidson 21
2d, J. Isaac, Bowmanville. 14
3d, James Weir, Scarborough. 7
Foal of 1875, James Weir. 8
2d, J. Isaac. 6
3d, Canada-West Farm-stock Association. 4
Span mares, " " " 20
2nd, " " " 15

The Most Economical Way to Clear Woodland.

SIR,—In reply to an Algoma inquirer, we would say that dynamite (the article he referred to) has been successfully used in clearing stumps and uprooting trees, root and stem; but there is danger in its use unless the person using it has some experience in the matter. It is more efficient and expeditious in doing the work than gunpowder, but the expense is not much less. Inquirer will see annexed an article from the N. Y. Tribune giving a new way to clear forest land. It is worthy of more extended trial:—

"A Yankee method of clearing forest land that proved effective and economical may be new to some of your readers. Ex-Mayor Charles Williams of this city had a tract of pine (white and pitch) of some twenty years growth that he desired to prepare for tillage. Armed with implements which were hoes on one side and axes on the other, the woodmen cut the roots several feet from the trunk and below plough range; a rope was attached at a proper elevation, to which a horse was hitched, and with celerity and ease the tree was levelled. The extra cost of this method over chopping was fully defrayed by the value of the additional fuel, leaving the surface as clear of obstructions to cultivation as an old field. Two fine crops, one of rye, followed by another of Hunga-

rian grass, have been obtained the fifth year. It was on Merrimac "intervale" land—a light loam, very productive but easily exhausted, and as easily kept in high condition by judicious manuring.

Draining.

Professor S. W. Shattuck, of Illinois, in a paper on "Draining on the Farm," read at the late meeting of the National Agricultural Congress, said that no permanent improvement can be made without tile drainage, which is much better than surface drainage. Among letters from farmers giving their experience in tile drainage, most of them had put their drains three feet deep, while the Professor favors at least four feet, and recommends that no farmer should shrink from drainage because of its expense, for the result and advantages are sure to be great. He advised round tile and the following of a systematic plan of drainage. Tile drainage has been in use in Illinois for sixteen years.

The Cheapest and Best Fertilizer.

I sow clover seed about the first of April, and have never had a failure either from frost or drought. I regard clover as our cheapest and best fertilizer. Clover should be mowed before the sod is turned over. The stocks are of but little value as manure, and in a light sandy soil they work positive injury. The principal fertilizing properties of the plant reside in the root. A good clover sod will furnish enough plant-food for two crops of wheat in succession on moist soil. I don't think a farmer can afford to purchase fertilizers unless his soil is too poor to raise clover. I keep my land in good condition with clover alone.—N. Y. World.

The Western States.

The opportunity for obtaining farms of fertile land in the Western States has induced some even from "this Canada of ours" to try their fortune in that country of great promise. The picture, however, has its dark side, of which we are privileged to get a view occasionally. It is well that our readers should know what settlers there have to contend with, and they may find they have some cause of being satisfied that their lots have fallen in pleasant places in Canada. We give some extracts from the columns of the New York Sun. In an article on stock-raising at the West the Sun, referring to the scarcity of water in most of the localities that are still open for settlement, states that the pioneers in stock-raising at the West made their claims along the streams, often in long, narrow strips, thereby cutting off those who settled further back, and depriving them of access to this important element. All through the Western territories, small and large streams are controlled by monopolists, who will permit no infringement on their rights, and ask high prices for water privileges. Thousands of cattle have no water except what can be got from stagnant pools, which grow putrid under the summer heat and become quite unfit for animal consumption. The Sun remarks that "anyone who has seen cattle sucking up the filthy stuff during the months of August and September will perceive at once the cause of some of those fearful diseases that break out among stock compelled to partake of such liquids." Parties thinking of breaking up in order to go West are cautioned to make account of this formidable difficulty, and to remember that unless they have means enough to buy a costly water front they will have no chance of success. Men of small means have no show in a legal contest with capital; the laws of trespass are little better than a farce; and the man who has the largest herds is sure to win by night if not by right.

If we remember right, it was only a little over a year ago that there was not an owner of a flock of sheep from Trinidad to Cheyenne who did not lose from twenty to fifty per cent. of his flocks through starvation and exposure to cold during one of those cold storms which are of such frequent occurrence on the Western plains almost every winter. We were also informed that thousands of cattle perished from the same causes and at the same time. If a man in visiting the regions of the country we have named makes inquiries in regard to these reported losses of stock, he will be informed that "it was no here, but just over the range where the storms are more severe than here."

In a prospectus just received of a proposed colony which is to locate in Colorado, we read:—

The cattle are not fed during the whole year. The climate is unsurpassed anywhere in the United States. The winters are mild, subject to no heavy snows, etc. These are the stereotyped recommendations which have been sent out from almost every new settlement from the northernmost parts of Minnesota to Mexico, and still there is not a spot within that range of country where cattle and animals of all kinds do not at some seasons of the year require feeding and shelter. Any man who fails to provide these is a brute, and totally unfit to have the care of stock of any kind. That sheep, horses and cattle do exist for years in many localities on the plains without shelter and food beyond what they can find for themselves, is no doubt true, but it is no credit to their owners, and the sufferings of such animals are frequently terrible. The man who starts out in the business of cattle-raising anywhere on the Western plains, north or south, with the idea that his stock require no shelter from cold storms in winter, and no food but that which they gather for themselves, will sooner or later see his herds disappear either through starvation or disease.

Wheat Bran as a Fertilizer.

"A Subscriber" writing from Marietta, Ga., to the Rural New Yorker, asks for information in regard to wheat bran as a fertilizer for corn or cotton. Price of corn, 60c.; cotton, 10c.; bran, \$15 per ton; cash price of commercial fertilizers, \$40 to \$50. The following is the reply, which will be of special interest to the readers of the Bulletin, who are beginning to use commercial fertilizers:

Wheat bran has been used as a fertilizer in the Connecticut Valley for tobacco with much success. It has been used by market gardeners in growing sweet corn and melons also very successfully. There is no doubt that it would answer equally well for corn or cotton. Rye bran is richer in fertilizing matter than wheat bran, and the following table gives the comparative values of both wheat and rye bran, barnyard manure, Peruvian guano and ordinary raw-bone superphosphate, both intrinsically as fertilizers, and also commercially in money.

In 2,000 lbs. there are contained in
Table with 5 columns: Fertilizer, Nitrogen, Potash, Phosphoric Acid, Money Value.
Wheat bran... 44.8 28.6 54.6 \$18.10
Rye bran... 46.4 38.6 68.6 20.60
Barnyard manure... 9.0 10.4 4.2 3.25
Peruvian guano... 200.0 46.0 260.0 78.70
Raw bone Superphosphate... 40.0 2.0 320.0 42.12

The values are made up at the estimate of 25c. a pound for nitrogen, 6c. for potash, and 10c. for phosphoric acid. In practical use the materials in the bran would be more valuable than in any of the others, because they are in an organic form readily decomposed, and more easily dissolved and assimilated by plants.

It follows, then, that wheat bran (and more especially rye bran) is cheaper as a fertilizer at \$15 per ton than Peruvian guano at \$70, or superphosphate of lime at \$40 per ton.

It might be proper to state that bran contains, in addition to those matters given above, much oil and fat, which would be usefully applied in feeding animals. Nearly the whole of the fertilizing properties would remain in the droppings, liquid and solid, of the animals fed; and, moreover, they would be in a more available condition in the dung than in the raw bran, so that it would be a great economy to feed the bran, and save and use the manure made from it. Used in this way, bran possesses a much higher value as a fertilizer than any of the mineral manures, and the manure made from it may reasonably be considered as equal in value to the bran itself, notwithstanding a portion of it has been utilized as a nutriment for feeding animals. To feed bran, then, and make manure from it, is the most useful and economical method of utilizing it as a fertilizer.

Notwithstanding what the millers in the State of Michigan say against the Clawson or Seneca wheat, the farmers of that State have sown more of it than ever heretofore. Mr. Henry Bidwell, of Plymouth, in the same State, received the first premium on the Clawson as the best bushel of white winter wheat. The straw was from four to six feet in height. The yield was 46½ bushels to the acre. The weight per bushel was 62 pounds and 10 ounces.

Belvidere Dairy Farm.

C. J. M., of Ogdensburg, N. Y., gives the following sketch of a Canadian farm in the *Country Gentleman*:

A visit to Mrs. E. M. Jones' Belvidere Stock Farm, and her choice herd of Jersey cattle, must be productive of unalloyed pleasure to all lovers of fine animals. The farm is half a mile east of the old town of Brockville, Ont., on the St. Lawrence river. From the capacious veranda of the manor-house, on the north side of the river road, a magnificent view, both up and down the river, stretches out, and in the immediate front, at a seeming distance of but half a mile, is the ancient village of Morristown, N. Y., lately awakened from a Van Winklean sleep by the whistle of the Utica and Black River Railway; while in the immediate foreground is the noble old river and the lowest two of the far-famed Thousand Islands.

Mrs. Jones has accumulated an uncommonly fine herd of Jersey cattle, at present consisting of 16 head. Among the cows is Silverside, which took the first prize last year at the Ohio State Fair, for the best Jersey, and also sweepstakes for any age or breed; and it is no disparagement to the judgment of those who placed her in such high rank to say, that neither in beauty nor in quantity or quality of milk is she the superior of others of the herd she now finds herself in. Near her and side by side, stand two Mulberrys, mother and daughter, the former showing a fine udder and giving over 21 quarts of milk daily. She will produce fully 350 pounds of butter a year. Mulberry 2nd has a record at three years old of 14 pounds a week. Mulberry 5th, now three years old, bids fair to equal any of her predecessors. Another beautiful cow is Elsie's Favorite, of solid color, only three years old. Antelope is a three-year-old, of extraordinary quality and vigor, deep bodied, robust and fine in bone. He is long, deep in the flank, broad in the loin and between the hips, a trifle heavy in the horns, but beautiful in the head and neck, and soft and mellow in the skin. Playing near are a couple of promising bull calves of the Mulberry family. Others of this herd might be mentioned, if space allowed.

Farmers who might otherwise feel inclined to keep fine-blooded cattle, are often discouraged from doing so after reading descriptions of the expensive establishments of men of wealth, with almost palatial barns and appurtenances for their favorites. Belvidere Farm has nothing beyond the reach or ambition of any farmer who may desire to keep his cattle comfortable. Everything is clean and neat; only this and nothing more. The stables are clean, the cows are clean, and have an abundance of fresh air and pure water. From the time the milking is over until the butter comes, and, made up in handsome quarter-pound pats, wrapped in white muslin, is put in an ice-chest, and consigned to the expressman, no dirt is allowed to come nigh. There is certainly nothing in all this which can be considered extravagant, and yet this butter is sent to a hotel, which, though recently opened, has already acquired a reputation second to none this side of the Pacific Slope, at a price more than double that paid for the product of adjoining farms. So much for Jersey cattle and careful butter-making in Canada.

There are also some very fine Suffolk pigs on the farm, which are healthy and very promising.

Effect of Salt on Wheat.

In an interesting series of experiments recently made on the farm of the Royal Agricultural Society of England, the manurial value of salt was unmistakably indicated. An acre of wheat dressed with three hundred pounds of common salt yielded thirty-nine bushels of grain, with a proportionate amount of straw, while an adjoining acre, left unmanured, produced only twenty-nine bushels per acre, with the straw imperfectly developed. The entire cost of the crop is not stated, but this experiment shows that the additional ten bushels resulting from the salt were produced at a cost of thirty cents each. In another case a piece of ground intended for wheat was ploughed the preceding fall, and again in May, when it was sowed with salt, and afterward ploughed before seeding. On the 1st and 2nd of September wheat was sown at the rate of two bushels to the acre. The crop when harvested, yielded, according to the estimate of the owner, Mr. John Parke, not less than forty bushels of grain to the acre, with a luxuriant growth of straw. From these and many similar cases the inference seems to be that salt is a specific

for the wheat crop, imparting solidity to the grain and firmness to the straw. But it must not be concluded that equally good results will follow the application of salt.

The Hessian Fly.

Late sowing and pasturing do not in any way prevent the fly's depredations in this locality, and I have my doubts if they do in any other. The fact is, this pest can be very much more easily prevented than arrested and destroyed after it has a foothold. It cannot endure early and clean culture, nor will it encroach upon any soil that is compact, smooth and free from old stubble, grass, dead weeds and stalks. My experience is that if the soil is not put in the proper shape at the outset the fly is sure to appear, be the seeding done in September or November, January or March. Pasturing is a ruinous practice. In the first place it absolutely injures the soil, the injury being of that kind which is not easily cured. Then again it seriously hurts the plant. The leaves are the lungs, and the main stalk that comes up first is the support of all the rest that tiller from it. Some grasses thrive by cropping. Wheat cannot because the ultimatum is grain, but in grasses it is fodder; hence the importance of keeping every wheat blade intact. Clean culture is absolutely essential in producing any crop. More especially is it in preparing the soil for wheat. Farmers will do well to make the experiment in turning their wheat ground at least two months before seeding. If clover sod, turned as soon as the first crop of clover is cut, and at seeding time cultivate with small ploughs, harrow and roll.—[East Tennessee Letter.

The Stalk-borer.

This is a popular term now generally employed for a worm that comes under the notice of farmers and gardeners about as often as any other insect they have to deal with. It seems also to be on the increase. It is a slender, smooth caterpillar, closely allied to the corn spindle-worm, but it is a much more general feeder. It is most commonly found in the larger stalks of the potato, but also occurs in the tomato, rhubarb, dahlia, aster, lily, spirea, castor bean, etc. While very young it is destructive to wheat, but deserts the latter as it increases in size for such larger stemmed plants as may be convenient. It also occasionally attacks Indian corn, boring both the stalk and the ear. Among its natural food-plants are various noxious weeds, particularly the cockle-burr (*Xanthium strumarium*), its extreme partiality to which is a measurable compensation for its depredation on valuable plants.

When young this larva is of a livid purple hue, with a few fine, light, longitudinal lines, but as it matures the color varies to pale green, and the longitudinal stripes became broader. The full-grown worm is 1½ inch in length, and nearly ½ inch in diameter. About the last of July it either leaves the stalk in which it has burrowed and enters the ground where, within two or three days, it changes to a naked brown chrysalis of the ordinary form, or else it transforms within the stalk. The moth (*Gortyna nitela*, Guen) issues during the month of September, and hibernates in a torpid state. It expands nearly 1¼ inches, and is of a mouse-gray color, the front wings being finely sprinkled with yellow scales, and having a pale, curved line across the outer third. The moth is somewhat variable, and I have proved by careful breeding that that which has been described as a distinct species (*Gortyna nebris*, Guen) is but a variety of the species in question. The only practicable remedy for the depredations of this insect is to pull up and burn all plants that suddenly wilt.—[Professor C. V. Riley.

Wheat Planted in Hills.

As a general rule too great a quantity of wheat is sown to the acre. In England wheat has been planted in hills, or so that it would not take a peck to plant an acre, and the yield from this sowing has reached from 75 to 100 bushels to the acre. We hope some of our farmers who have a drill would try the experiment of drilling wheat double the distance of the drill pipes, placing but few grains in the drills, and cultivate the wheat with small implements. One-fourth of an acre will be sufficient to test this matter, or about four rows across the field. Great truths are learned by such experiments.

Improve the Seed Wheat.

We may very well take the trouble to improve the varieties we have, and which we know to be good, so as to enlarge the yield and better the quality. The best attainable yield is somewhere about sixty bushels per acre; the best weight per bushel about sixty-six pounds. The best crops now grown in this country yield about forty bushels, and the best weight is not more than sixty to sixty-two pounds per bushel. Where such crops as these are grown, it would not be difficult to reach a maximum product if we could add somewhat to the prolificness of the seed and increase its size and weight. But what shall be said as to those ordinary crops which reach but ten bushels per acre, and which have year by year grown less and less by neglecting to improve the seed? Here there is abundant room for the most certain improvement. There can be no doubt that better preparation of the soil and the use of good seed would result in a large and immediate improvement. Then by selecting the best ears from each crop and sowing these upon soil still better prepared, the yield could be gradually brought up to a higher, if not the highest point. Sixty bushels per acre, if not more, have been produced by one farmer, who has been patiently engaged for years in improving his grain by selecting the best each year and using the best methods of cultivation.

Fall Plowing.

This month and next is a very good time in this latitude for breaking up sod-land for next spring's crops. In breaking meadow I put three horses abreast, and use a rolling coulter, as I find that a plow runs much easier. I have never found it any advantage to break up sandy land in the fall, as it seems to leach so much and washes a good deal. But the clay soil is acted on by the frost, and a good many worms of various kinds are no doubt destroyed.

I never like to bring to the surface more than half an inch of the under soil at a time. Where this is turned upon the top of the surface soil late in the fall, it will become several shades darker by spring, owing to the action of the frost, rain and sun upon it during the winter months.

I think it a good plan to sow from twenty-five to thirty bushels of air-slacked lime on the sod before turning it under. The orchard is greatly benefited by it. I find that fall plowing sod, late enough in the season, so that the grass will not start in the fall, puts the land in a good condition for a corn crop. For an oat crop, I think the yield is increased as much as four or five bushels per acre over what it is, when the land is not plowed until spring.

In fall plowing, where there is no underdrains, or the land is not subsoiled, the lands to be plowed should be narrow, and laid off in such a way that the dead furrows will come in the low places and carry off the surplus water. If need be, let the plow run three or four times in the same place and then pass along with a sort of scraper, or remove with a hoe, any clods that may have fallen back into the bottom of the furrow.—E. S.

Conclusions in Regard to Special Manures.

In a recent address on chemistry in its relations to agriculture, Mr. J. B. Lawes submitted the following general conclusions arrived at by experiments:—1. That a mineral superphosphate of lime has given a considerable increase in each crop of rotation, although used without any other manure, for a period of thirty years. 2. That in consequence of grain containing large quantities of nitrogen and phosphoric acid, and small quantities of potash, manures containing soluble phosphoric acid and soluble nitrogen, as ammonia or nitric acid, are especially applicable to these crops. 3. That when crops containing large quantities of potash, such as roots, potatoes, and hay are sold off the farm, manures containing potash, such as purchased dungs, appear to be more suitable. 4. That although potash, phosphoric acid, and nitrogen are the chief manure ingredients in farmyard dung, in the manure from artificial foods and in artificial manures, still the differences in form in which these substances are met with greatly affect their value; the present method of analyzing manure does not properly recognize these distinctions, and the valuations founded upon these analyses are altogether false and erroneous.



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 ½ ounce.

Corn and Hungarian Grass.

SIR,—I can fully endorse the sentiments expressed concerning the above subject in the September number of the *ADVOCATE*. I commenced this spring on a run-down farm of 150 acres, and had fourteen milch cows to feed, beside three horses. I put in three sowings of peas and oats for a soiling crop; also three sowings of Western corn. The first sowing of corn was on rather cold ground, any a wet day or two after caused part of the seed to rot. Early in June I sowed it with Hungarian grass, and had splendid crop of mixed fodder, fully equal to anything in my experience. I have about twenty tons of Hungarian grass hay, in good condition, from five acres, and hope with other produce to be able to winter my stock with little purchases.

OLD COUNTRY FARMER, Niagara.

[We would advise each of you to refer to your September number, and read the article again. There is money in it.]

SIR,—I beg to thank you for your kindness in sending me the *FARMERS' ADVOCATE*, which I have had great pleasure in reading. It is something new to what we are accustomed to get in this country, being so full of valuable information to please the tastes of everyone, which must make your subscribers' reading appetites always longing for your next issue. My wife wishes me to thank you on her behalf for the *FARMERS' ADVOCATE*, as she enjoyed the several numbers very much.

We have had a beautiful season, and got splendid weather now. I never knew it keep so plentiful. Farmers could do very well if prices would improve. At present prices farming is a losing game in this country. You Americans will ruin the English farmer. If trade would improve prices for our produce would get better; you would also consume more of your produce at home, and not then be able to send so much to the Mother Country.

The best classes of shorthorns are still selling well; the Duke of Devonshire had a capital sale. No doubt you have seen an account of it. I bought Duke of Oxford 45th, under twelve months old, to put on the Duke of Connaught's heifers, for £1,575. He is a very grand young bull. Our shorthorns are doing well; had a capital run of heifer calves by Duke of Connaught, and grand ones they are.

J. P.

Naur Villa, Berkeley, Gloucestershire, England, Oct. 2, 1878.

DEAR SIR,—The pound of Defiance wheat I purchased last spring has done very well, although part of the straw went down, causing considerable loss, and the berry shrunk some, yet I have 50 pounds from the one pound of seed. It grows a strong straw and large ear, and is likely to be very productive. Spring wheat will not average half a crop in this part. Fall wheat—Clawson and Silverchaff—is good. Soules' is blighted and shrunk. Oats good; potatoes fair where the bugs were attended to, otherwise they are small and few in a hill; hay is a good crop; peas are fair.

J. F., Bendley.

SIR,—Geo. A. Tucker, of Westmeath P. O., County of Renfrew, has this season (and without any extra care whatever) raised a citron which measured nineteen inches long, thirty inches round, and weighed thirty-three pounds; and he wants to know if they can beat that out West.

J. R.

SIR,—Are brewers' grains good for cattle and horses? And what are they worth per bushel to feed? and any information you can give about them.

A., Sherbrooke.

[Brewers' grains are generally fed to milch cows with other food. They serve to increase the yield of milk, but such food as cornmeal, crushed oats, etc., must be fed with the grains if it be an object to have the milk rich. We have had no experience in feeding them to horses. Having parted with so much of their nutritive properties, we think they cannot be very valuable food for them.]

Every-day Matters.

The following is from one of our Massachusetts readers:—

MAKING AND SAVING MANURE.

A great deal, and very appropriately, is printed in our agricultural journals concerning the necessity of making and saving manure; and yet it is surprising, in going about the country, to see what quantities of genuine manure, and materials for working into good fertilizers, are allowed to be wasted, for any such purpose.

The manure heap should be the one savings bank of the farmer, and farm deposits made here will return good interest, whereas, left elsewhere, they would prove but nuisance. There are acres of swale grass and weeds growing all over the country, in localities, which if properly saved for the stable yard or compost heap, would result in the saving of thousands of dollars. The leaves of trees, left to blow into corners and hedges, furnish excellent material for the stable and compost heap, aside from their many other uses, and make the best of manure after decaying. Then there are the many animals which die on the farm annually from various causes, instead of being converted into manure and compost, are too frequently drawn away into some retired place and buried, or left unburied to poison the air with their putrefying stench.

Again, how frequently is it the case that the wash and slops from the house, and the deposits of the privy, are left to waste their ammonia on the air or pass off in the drain or brook, instead of having a pile of dry muck under cover on which the liquids may be thrown in the one case, and a quantity deposited in the vault with the excreta to fix its ammonia. If the manure, which is wasted in the air, and washed away from exposure to wind, rain, etc., could be saved and judiciously applied to the soil, it would add just so much to our individual and national wealth.

There is scarcely any other one thing wherein farmers are so negligent, or indifferent, as in regard to their manurial resources. Many farmers allow from one-third to one-half the value of their farm manure to waste, while others will spend as much, or more, annually for commercial fertilizers as would pay the hire of men to do the necessary work in saving and making an equally good article from matter allowed to waste right before their eyes.

The intelligent husbandman will see, in looking around him, many sources, not here referred to, from which he may draw material, which, if taken advantage of, will greatly add to the manurial supply. Then manure makes the best of guano when properly saved and applied; urine of the stock taken up by dry muck or earth also makes excellent manure. In short, all substances, animal, vegetable and mineral, which are capable of being converted into fertilizers, should be saved to add to the general deposit.

W. H. W.

Worcester Co., Mass., U. S.

SIR,—I noticed an article in the February number of the *ADVOCATE* entitled "Honey-locust for Fences," from the pen of E. M., of Drummondville, Ont. How to fence our farms will soon be a live question—at least with the farmers of this country which is mostly prairie land. If you would kindly inform me where it would be best to procure such, and of whom, you would greatly oblige.

Also let me know if the Red Chaff is a bearded wheat, and where I could purchase some, as the wheat we have here is so mixed that is almost an impossibility to get clean seed. I would like to try the Red Chaff as it might improve by a change of climate.

C. A. B.

West Lynne, Manitoba.

[The Red Chaff and Honey-locust seed could have been procured last season from W. Rennie, Toronto; J. Bruce & Co., Hamilton; or the Agricultural Emporium, London. The Red Chaff wheat yields well, but it is injuring the reputation of Canadian flour.]

Caution.

SIR,—I was once a subscriber to your valuable paper, and will be again if I will ever be fortunate enough to get settled down on a farm again. Considering you a farmer's friend, I desire to lay before you some trouble, that I lately got into. The other day I was appointed an agent for the sale of fanning machines, the company taking my note for \$160 for four machines, to be delivered at a certain time and place. The company showed me letters patent for their mill for both Canada and the United States. It never once occurred to me that I was being victimized, or that I was not dealing with a reliable company. My reason for going into such business was that I intended to take up wild land in Winnipeg next season, and that I might make a little by selling a few machines to new settlers. I did not intend to do anything more in these parts than to sell my sample machines and to see how farmers liked them. I sold them a fine horse, for which they allowed me \$90 on my note. The horse had the sweeny, nevertheless they seemed very anxious to get it, promising me \$10 extra if the sweeny was likely to get better. They alleged they wanted the horse to make up another team to go round with their machines. They gave me instructions how I ought to work for them, not to go through the country trying to find out who wanted machines, but to take up a position at some hotel as they did and be on the lookout for business. If I could find out any one that could be induced to take a machine, I was to hold out inducements to him by giving him a commission of \$10 each on a few machines, making the best bargain I could, and taking his note for \$40 for one machine. Their mills were to be furnished to me at prices ranging from \$30 to \$15 each, as I gained favor with the company. By the time I got through with them I began to suspect that they were nothing but swindlers, but it was then too late.

I shortly afterwards went to see one of their mills, which they left in the neighborhood, at work. The fact was it would not work at all; if it would run a few minutes without getting out of repair, it would work so slow that nobody would be bothered with it. I immediately wrote to the company requesting them to keep their mills and return me my note, and they to have my horse for their trouble, as I was determined not to try to impose on any one by selling a worthless article.

Happening a few days afterward to see the same men, I demanded of them to return me my property or I would expose them through the press, but to no purpose. Now, sir, what is your opinion of this style of business? Being a very poor man, I think it is a very great hardship that my money goes to help these men to carry on the imposture on others, and that there is no remedy. I scarcely know what advice to ask of you. If you are not acquainted with their machines I would gladly present you with one of those that are coming to me, if I get them, so that you could put it to a thorough test, if by that means the public could be warned as to their true value. The company have their headquarters in Ontario.

I would terribly hate to have my name mixed up with such a dirty muddle in having their style of business exposed, but some how or another I would like to see a stop put to their villainy.

[We have omitted names to avoid trouble.]

We have often cautioned our readers to avoid the wary tales of patent-right men. There may be some trustful men at the business, but even these will point out all the advantages of their wares. Of course their object is cash. We do not want to try the mill referred to.]

SIR,—Having heard of some trials being made of horses being worked without shoeing, and of leather shoes on others, I am desirous to know what you think of it. Please let us know something on the subject in your valuable paper.

N. R.

Bothwell, Oct. 24, 1878.

[There has been a good deal said lately by agri-

cultural writers on this subject. It may be argued in defense of shoeing horses, that protecting the hoofs of horses originally was caused by a necessity for some such protection. Shoeing can only be dispensed with on the farm, even if it can there. On gravelled roads or macadamized streets the hoof would soon be broken and the animal lamed perhaps for life. There are countries where horses are not shod, but their work is comparatively light—no hauling of heavy loads over rough roads.

Horses are shod on the plains, not with leather, but with rawhide. A strip of rawhide well filled with hot pine-tar to make it hard and waterproof has been found sufficient for general use. A more desirable shoe has been made with two or more thicknesses of hide pressed and fastened together with straps. Such a method of shoeing may in some cases be found very useful, as in cases that frequently occur of diseases of the feet. In such an instance a temporary use of shoes cut from rawhide or from sole-leather properly prepared may be very serviceable when the iron shoe would be injurious. For farmers, when the land is very rough or stony, such shoes we have no doubt would be useful during the heat of summer. We have had to use such shoes on a valuable mare for some months.

SIR,—Every one to whom I have spoken on the subject complains of the potato crop. In wet places the seed missed badly, and what did grow has rotted in the ground; and in dry ground, where the potatoes were stored in apparently good order, they are becoming affected with the dry rot.

Apples are a plentiful crop, but in some orchards they are rotting on the trees. I had most of mine hand-picked, but nearly all of them were bruised to a greater or less extent on the trees, and consequently I do not expect they will keep well through the winter. This is owing to the friction of the branches during the repeated gales of wind we have experienced.

Of fall wheat a very much larger quantity has been sown in the Indian peninsula than was the case last fall. The kinds principally sown, as far as I can learn, are the Treadwell and Clawson. I finished sowing our fall wheat on the 9th ult., and it is now over ground and looking well. As we have always more snow here than in the more southern section of the province, fall wheat is seldom winter-killed, except on a hill-side or on exposed knolls, where the snow drifts away in the winter.

The potato beetles do not appear to have been much affected by the premature decay of the potato stalks, as they are numerous in the ground where the potatoes were raised, and we cannot yet afford to dispense with the Paris green. As for the potato-bug picking machine, it cannot be used until the potatoes are well advanced, and consequently in the early stages of their growth either Paris green must be used or hand-picking resorted to.

SARAWAK.

[As our correspondent's communication came to hand late, we had to curtail it considerably.]

SIR,—Having been a reader of the FARMER'S ADVOCATE for two years, it is with much pleasure that I renew my subscription. The few farmers in this locality that take it speak of it in the highest terms. I hope that its circulation may be greatly increased, as it contains so much valuable information for the farmer.

Farming has very much improved in this place the last ten years. We seem to be waking up to the fact that our land will repay careful cultivation. As a proof that our soil is good, I may state that last spring a friend of mine gave me part of a small lot of wheat sent to him by his son from Colorado. I gave it an extra chance, and it yielded ninety-five from one. I tried on a small scale what Grey buckwheat would do in drills, and succeeded in raising three bushels from half a pint of seed. I counted as high as twenty-three stalks produced from a single grain in my barley field.

If we do not go on improving our farms it will be our own fault, as we have an abundance of manure at a trifling cost. There is a sea plant called Kelp that comes in with the fall tides in large quantities, and it is found to be nearly equal to stable manure. Then in our harbors and bays there are large bars of oyster-shells. We have diggers now that will lift from 30 to 40 tons per day, with two men and a horse to work them. Another valuable manure is the lobster-shells pro-

duced by the factories that dot our shores. Then we have any quantity of plaster, but, strange to say, this excellent fertilizer is only beginning to come into use with us. The few that have used it have found it to improve the wheat and clover crops very much. Last spring I sowed it on part of a clover field at the rate of one barrel to the acre, and it nearly doubled the yield of hay. It is the cheapest and I think as good a top-dressing as we can get for clover.

S. F., Wallace, Nova Scotia.

[The farmers of Ontario would like to have a chance to get some of your sea-weed and shells.]

Poultry Yard.

Fattening Poultry for Market.

As the season for fattening poultry for market will be upon us ere long, a few suggestions in regard to doing so successfully, gleaned from considerable and extended experience, will not be out of place.

In marketing poultry in our large cities there are far too many farmers who keep all their shipments until a few days—say two or three—before the holidays, and then rush in all at once. This is the time thousands and thousands of packages of poultry reach the commission men to be disposed of, and the quantity is so large that the prices rule low. This is very good for the buyers, especially for those rather weak in the pocket-book, but then farmers are compelled to receive a very low price. A couple of weeks before, or a couple of weeks after the holidays, is generally better, for the prices usually rule higher than during the glut which is caused by the immense supply sent in for Christmas and New Years. A good thing is for farmers to take a first class paper and keep posted in regard to prices, and ship when the prices seem to warrant it. There is even more art in finding a good market and successfully and profitably disposing of the products of the farm, than in producing them, though few farmers and stock breeders fully realize that fact.

Three weeks is long enough to fatten fowls; and to make it easier and more profitable to do so, the birds should be kept growing briskly from the start by a liberal allowance of good feed, plenty of exercise, and good care. A stunted bird or animal will not pay to fatten, as a rule. While turkeys cannot bear confinement and will rapidly lose flesh when confined, as we have found out to our cost, chickens, when properly handled, will fatten more quickly, and will, consequently, pay well to take up and fatten, for the simple fact is that each day the fowl requires a certain amount of feed merely to sustain the functions of the body, and the fewer the number of days required to complete the process, the greater the degree of profit. A darkened room is the best place for fattening fowls, the room to have a deep sand floor. Feed them in the morning, and have water troughs convenient for them to get their water; allow about half an hour for feeding, and then darken up the room, excluding all the light, though affording ventilation. At noon give another feed, as before, repeating in the eve. Do not give them any perches, for they can and will make themselves comfortable on the sandy floor. If roosts or roosting benches were supplied, the efforts made on getting on them would delay their fattening materially.

In fattening poultry the cheapest and best food is undoubtedly corn in its different forms. One or two feeds of whole corn can be given, and scalded corn-meal, corn-meal mush, a mush made of corn and oats ground together, boiled beans, &c. Where milk is plentiful, and on a farm we usually find plenty of skira-milk, thick milk, &c., let the fowls have as much of it as they will take, and it will materially hasten the fattening. Watch your birds carefully, and if you notice any of them commencing to mope around under this system of high feeding, turn them out into the yard and let them run until more are taken up to fatten. Under proper management the fattening will be accomplished in about two weeks, and should not take much longer, for naturally the fowls cannot endure the stalling process very long without showing bad effects, being deprived of exercise and daylight.—[D. Z. E., Jr., in Poultry Journal.]

Poultry Facts.

In reply to various questions I give a few facts in brief:—

The usual quantity of grain for a fowl is one

to one and a quarter bushels per year, when at liberty to forage; somewhat more is required for birds in confinement. To make ducks lay early in the year, give them good care and feed well of rich food. Give them as much room as possible and plenty of clean water. Ducks are usually healthy, so much so that their diseases are very little known. No water-fowl is troubled with lice if it has plenty of water to swim and bathe in.

To destroy hen lice, give quarters a thorough whitewashing, and as soon as dry go over the surface with coal oil—smudge it into corners and cracks in the walls, nests, roosts—everywhere. Make the coal oil application every month during warm weather, and lice will not be troublesome.

Look over the flocks of chickens, and mark in some way the most promising and reserve them for breeding. The largest and finest are usually sent to market, but the best should be kept for stock purposes. A few years' careful and persistent selection will greatly improve the size and appearance of the flock, as well as increase its profitability.

The "Standard of Excellence" gives the marks by which purity of blood may be known.—[Dr. A. M. Dickie, N. Y. Tribune.]

The Apiary.

Feeding Bees.

Bees should be reared so as to give the beekeeper some surplus honey, instead of requiring to be fed by him. But feeding should be attended to, when necessary, at the proper time; by the use of movable-comb hives, deficient colonies may be supplied with one comb or more, containing honey, from a colony having a surplus. Enough food should be furnished them in the fall to last them until fruit trees begin to bloom in the spring; if done in the beginning of October, the bees will cap over the honey before the cold weather begins; uncapped honey absorbs impurities, often sours in the cells, dampens the air in the hive, and frequently causes dysentery among the bees. If the needy colony is in a first-class hive, any partly-filled box of honey may be placed upon the hive; the large openings from every comb in the hive, and the direct communication, induces them to take possession of its contents readily, even during freezing weather. Bees in common hives or in hives having a honey-board or air space between the frame and the box would sooner starve than enter a honey-box in cold weather. If needy stocks are not thoroughly fed in the fall, or if an unfavorable summer is followed by a severe winter and late spring, feeding may become necessary in the spring. Langstroth says:—"In the spring the prudent beekeeper will no more neglect to feed his destitute colonies than to provide for his own table." The feeding of bees should be done inside the hive or above their combs if there are passages from below; they should never be fed outside the hive, for that will always teach them the habit of robbing. If honey stored in frames or boxes is retained for such emergencies, it is by far the best method; but if all the honey in frames has been imprudently sold or used, the best food that can be given them is strained honey. In the fall, if the needy stocks are in the movable-comb hive, remove two or three empty combs from each, lay them on a board or table and sprinkle warm honey over the upper half of the comb until the cells are about two-thirds full, let it cool for a short time, then turn it over and fill the upper half of the other side, replace the combs in the hive and feed in the chamber a few days until the cells are capped over. The importance of feeding is only fully realized when we bear in mind that from a pound of sugar syrup, costing only about six cents, as much comb will be built as from a pound of honey, costing thirty cents. To make syrup for feeding, take brown sugar, and to every pound of it add one pint of boiling water; boil the whole for a few minutes and skim. If bees must be fed in winter, owing to neglect in the fall, pour the honey directly into the combs, if the stocks are in the movable-comb hives; if in the common hive, remove it to a room, invert it, cut out enough comb to admit a small plate filled with honey, place it near the bees and tie a cloth over the mouth of the hive to confine the bees; or a small bag filled with honey and sugar may be suspended in the hive from above, cutting away enough comb to admit to the cluster of the bees.—*Beekeepers' Guide.*



The Family Circle.

"Home, Sweet Home."

"What is to Become of Sam?"

A SHORT STORY.

It was generally supposed that Sam was what is called "deficient." As to his own family, they were sure of it; at all events, they treated him as if he were so. Not that they were unkind to him; on the contrary, they were all very fond of "poor old Sam;" but it seemed to be taken for granted that whatever he said was not worth noticing, and that almost everything he did was to be made fun of more or less. He was, in fact, the family butt, though the shafts were, as a rule, so tipped with good-nature as not to hurt his feelings.

Of course there were some patent reasons for all this. To begin with, there was something manifestly peculiar or backward in his mental development. He never could learn like other boys, and all masters had shaken their heads at him. Then there was a heavy comicality in his face, and an awkwardness in his gait, together with a stunted growth, all of which betokened an abnormal condition of nature, furnished some excuse to his brothers and sisters for regarding him as an oddity in their midst. At the same time it was yet more excusable in Sam himself, and far more accountable, that, being thus accustomed from his childhood (and he was now about nineteen) to be treated as if he were little better than a fool, he settled down more and more to being one. Hardly ever did he attempt to say or do anything in serious earnest, since almost everything he did or said was treated as a sort of joke.

There was no exception to this. Mothers always know best how to deal with the weak in the flock, and Sam's mother never laughed at him, and never despaired of him. "What is to become of Sam?" his father would say; "he'll never earn his own living;" and his mother would quietly answer, "Wait a bit, my dear; there is more in him, perhaps, than we think, but it wants to be drawn out, and I doubt if we are acting wisely in laughing at him as we do." She said "we," good soul, but that was only her discreet way of putting it.

Now Sam had a sister, Mary, of whom he was especially fond. Perhaps it was because she was the sister nearest to him in age, but it was more likely because she placed a little more confidence in him than the others did; it wasn't much, but it was more than he got from any of the rest. He would do anything for Mary, and when a certain Mr. St. Leger in the neighborhood took a fancy to her, it was amusing to see how Sam resented the engagement. This Mr. St. Leger had lately come into the neighborhood, no one knew where from; but he had plenty of money and very agreeable manners, and was a general favorite with the Freres family. Sam, however, never liked him from the first, and at length when he became Mary Frere's accepted suitor, Sam's aversion to him became intense. It must be owned that Mr. St. Leger took no pains to win him over to a more friendly state of mind. He had fallen at once into the habit of making light of the poor fellow, which as we have seen was the family custom, and when he saw how Sam shrank from him he had certainly gone out of his way to poke fun at him. It was an amusement, quite in accordance with the general practice.

The day was fixed for the wedding, and the Sunday had arrived when, in deference to Mary's particular wish, though very much against Mr. St. Leger's inclination, the banns were to be published in church. The Freres were all in their places, a great square pew in front of the electric chancel, and the electric shock of hearing them; the villagers were interchanging glances, some even cautiously rising a little to peep into the square pew, when a voice was heard all over the church, saying in the most emphatic way, "I forbid the banns."

Surprise was on every face, but it quickly gave way to a sense of the ludicrous as Sam was seen standing up in the middle of the pew, looking the clergyman steadily in the face, as much as to say, "There now; get over that if you can!" The clergyman was so amused that he had to rush on with his service to prevent on unseemly display, while Sam's kindred in the square pew were in every attitude of painfully constrained amusement. And there he stood unabashed and defiant, until his father plucked him by the arm and made him sit down. But none of them for one moment thought it was anything more than a very unaccountable freak of "poor old Sam's."

No sooner was the service over than he was assailed on all sides for explanation. Two only were serious about it—his father and Mary. "What is the meaning of this, sir?" said his father sternly; "what could have possessed you to make yourself so ridiculous?"

"He has got a wife already," replied Sam doggedly.
 "Who has?" was the general exclamation.
 "St. Leger."
 "Who told you so?"
 "Tom Tyler!" Tom Tyler was the village letter-carrier.
 There was a shout of laughter at this piece of information.
 "When did Tom Tyler tell you this?"
 "Yesterday. He brought a letter for Mrs. St. Leger."

Another shout of laughter greeted this; but Mary looked very grave, while her father said that, of course the letter was for St. Leger's mother, of whom he had more than once spoken. So Sam was sharply rebuked for listening to Tom Tyler's idle tales, and ordered to hold his tongue. "You'll have St. Leger try his horse-whip across your shoulders, if you don't mind," cried his eldest brother, and they all laughed again; but Sam was very unlike himself, and did not join in the laugh, but maintained a grave composure they had never noticed in him before.

Nor was it a laughing matter somewhere else. The news of that morning's interruption flew apace, with various additions and amendments. Thus improved upon, they reached the ears of Mr. St. Leger, who lived but a few miles off, and they created a profound sensation, so much so that, instead of spending the afternoon with the Freres, as expected, he took himself off, and was never seen by them again. It was discovered that Tom Tyler's version had been correct after all. Good riddance for Mary Frere; but a heart trifled with and wronged can never quite recover itself.

For a time Sam was almost reverently treated at home. They felt the force of his simple explanation why he had chosen such a singular way of uttering his suspicions, that it was "because they would only have laughed at him if he had told them," and were a little ashamed of themselves. But the old habit revived after awhile, as old habits, both family and personal, so easily do, and Sam's brains were held as cheap as ever, except by Mary, who was drawn to him more than ever, and by his mother, who never ceased to ponder in her heart, as only mothers do, the meaning of that display of firm intelligence and almost fierce affection.

"I'll tell you what it means," said her brother to Mrs. Frere one day, when she was talking to him about it—he was a lawyer in London, old John Quicksett of Gray's Inn, who could see a thing as shrewdly as most people—"it means this, that Sam has got a heart and a head, but his head is more out of the way than usual, and can only be got at through his heart; like an old-fashioned bed-room that can only be reached by going through another. Look here, sister; I like amazingly that story of the banns; it's grand. Not that there was anything clever in what he did, just the reverse, it might have been a most stupid mistake; but this is what takes my fancy so, the firmness of purpose, a far higher quality of mind than ever mere cleverness, that could make the poor fellow face everything he did for the sake of the sister he loved. There must be something in one who could run the gauntlet like that, when his heart was once fairly unlocked; and I think I have the key."

"I always thought so," cried Mrs. Frere, greatly delighted.
 "Well, let me try. I'll run away with Sam, and make a lawyer of him. What do you say?"

The grinning was epidemic round the table after it was known that Sam was to be a lawyer. His brothers and sisters could hardly look at him at first without smiling; it did seem so droll, so absurdly contrary to every notion they entertained of him. Had he sat before them in full naval costume as Admiral of the Channel Fleet, it would hardly have struck them as being more unlooked-for and preposterous. Uncle John's presence saved Sam from collective bantering, though the old lawyer was too wise to make any fuss about the matter; but when Sam was alone with his brothers and sisters he had a hard time of it, though all was, as usual, in perfect good humor.

At first Sam had, of course, to go through the usual drudgery of a lawyer's office, in which, if possible for any one to shine, he certainly did not. His blunders were awful, and provoked the wrath or ridicule, as the case might be, of his fellow-clerks, who were well-seasoned an somewhat ancient men. But his uncle never found fault with him. The most he said, when some frantic bungle was brought to his notice, was, "Sam, do this over again; you know you can do it a great deal better than that." And, sure enough, it was done better the second time. In short, his uncle began with aid, in spite of every discouragement, persevered in the plan of trusting him the better he did, and the more he treated him as if there was something in him the more he got out of him. Had Sam nothing in him to begin with, the plan would not have answered; but this was just what his uncle believed, namely, that there was something in him, but that it had been systematically laughed down and sat upon from superficial considerations, and that it could only be brought out by a total change of external influence and treatment. And now his powers began to show themselves and to expand, just as a shrub that has been stunted and blackened from want of room and congenial soil begins to throw out vigorous shoots when transplanted to ground that suits it, and where it has space to grow.

"Sam," said Mr. Quicksett one day, "we shall all of us be away this afternoon, and leave you in charge of the office. If that fellow Choker should come, mind you're not to let him see anything."

As the fates would have it, Choker did come. Perhaps Mr. Quicksett knew he was coming. Possibly Mr. Choker, who was a sharp and not very scrupulous professional opponent of his, had made himself aware of the office in Gray's Inn; and he brought with him a man who looked every inch a prize fighter.

"Is Mr. Quicksett in?—No? Well, it's of no consequence. I merely called to see a matter of form one or two documents in *Smith v. Jones*."

"Then I must trouble you to call again when Mr. Quicksett is in."

"Quite right young man," said Choker approvingly; "that's the right thing to say in ordinary cases; but you see, this is not an ordinary case. We've got an order of the court to inspect these documents."

"Where is it?" said Sam bluntly.

"You've got it with you, haven't you?" said Choker, carelessly turning to his companion. The young athlete fumbled in his pockets, and declared, with great apparent vexation, that he must have forgotten to bring it.

"I don't believe you've got it to bring," said Sam.
 "We'll have no nonsense, sir," cried Choker, in a passion "at your peril refuse to show us what we want to see," and the two men advanced on Sam in a threatening way. But little as he was, he never budged an inch. "I tell you what it is," he said, with all the coolness imaginable, "if you two don't leave this minute, I'll send for a constable."

There was no need to attempt that difficult operation. They were only trying it on, and with an affection of injured innocence Mr. Choker and his satellite withdrew.

On another occasion, after Sam had been some months in the office, his uncle came out of his room one day, and bade him go down at once to Judges' Chambers and look after some case that was to come on there. It is a thing that requires you to have your wits about you, to do that, for you come face to face with a shrewd judge, who cannot tolerate a fool. The old clerks in Mr. Quicksett's office appeared paralysed with astonishment at such an order; and one of them ventured, when partially recovered, to suggest a mistake on Mr. Quick-

sett's part. "It's a rather difficult case, sir, if you remember," he urged.

"All right, Mustay," was the cheery reply; "I know what I am about. The best way to learn to swim is to be pitched neck-and-heels into deep water."

The suspense was great among the ancients while Sam was away; but he came back in due time, and reported that the case had come on before the judge, and that his lordship had made an order in their client's favor. "Did he ask you any questions?" inquired Mustay. "Oh, yes; and I answered them," said Sam; but he did not mention, for he did not know it, nor will it be mentioned in the memoir of the learned judge when it comes out, that, accustomed as his lordship was to ready answers, it had actually crossed his mind for a moment, that the funny little-lawyer's clerk would make a capital witness—he was so ready, and said neither more nor less than was wanted.

Whether a good witness would always make a good lawyer, we need not decide; but it is certain that, in course of time, Sam made a very good one indeed. His was one of those not uncommon cases where supposed "deficiency" is superficial only, and where a far more grave deficiency is to be found in those who, by constantly laughing at it, run the risk of making it a real life-long imbecility. Sam's relatives never laughed at him again after the first visit he paid them, though they often laughed with him, for his drollery was inexhaustible. He never married; but his sister Mary kept house for him, and was perhaps a great deal happier than she would have been anywhere else.

HUMOROUS.

"That's a very stupid brute of yours, John," said a Scottish minister to his parishioner, the peat-dealer, who drove his merchandise from door to door in a small cart drawn by a donkey, "I never see you but the creature is braying." "Ah, sir," said the peat-dealer, "ye ken the heart's warm when friends meet."

A lecturer, addressing a mechanics' institute, contended that "Art could not improve Nature," when one of the audience set the whole assembly in a roar by exclaiming, "How would you look without your wig?"

Frankie (to Annie who is eating a sponge-cake), "Annie, let me be your baby, and you feed me." Annie, "Oh, no, Frankie, you can not be my baby; my baby must be in long clothes—one wot can't eat no sponge cake."

SECURITY IN SLEEP.—Defenseless citizen (afraid of burglars, to his housekeeper, on retiring for the night):—"There, Mrs. Binks, if they attempt to come in here, you see, the bell will ring, the dish-cover will be thrown down, and the coal-scuttle will be upset; so I've no doubt we shall hear them at any rate! And the mantrap I've set just inside the drawing-room door!"

"I find your recommendation very good, Bridget." "Yes, ma'am, and now I'll see yours, ma'am, if you please."

"Suppose a person were to be unkind to you, or strike you, what would you do?" A pause ensued, when one little girl, sharper than the rest, made the following laconic reply:—"It 'im again."

"Pa," said a little four-year-old, "there's a poor man out there that would give anything to see you."—"Who is it, my son?"—"It is a blind man."

"I want to find out who is master of this house," said the man with a book under his arm to the vinegary-looking woman with a pointed nose and a very small top-knot who opened the door for him. "Well, stranger," she said with arms akimbo, "you just walk around into the back-yard, and ask a little spindle-shanked deacon you'll find there fixin' up the grape-arbor, and he'll tell you if I don't boss this ranch he don't know who does. Now what do you want with me?"

A ragged, greasy, unkept tramp went shuffling into a lawyer's office one day, and asked if Mr. —, the jurist was in. He was. Well, the pedestrian wanted a lift. He was dead broke, without a nickel, and was troubled with an aching void in his stomach. The legal light expressed some surprise as to why he had come to him for help. "Why, you see, Colonel," said the pedestrian, "I'm kind o' related to you. I used to be acquainted with your divorced wife." The request was based upon such unique grounds that the jurist bestowed upon his charity-client a solid silver half-dollar.—*Boston Courier*.

At Lalmellington Station, Ayrshire, lately an elderly Irishwoman who had arrived a few seconds after the train had started set off to run after it. She of course soon came to a halt, when she began to abuse the unaccommodating engine, adding, with a "nate" brogue, "Faugh, the great black ugly lump! When she gets as ould as me, bedad she won't run so quick!"

Minnie May's Department.

MY DEAR NIECES,—The perfect summer days have flown, and those of November are upon us. I will give you a brief account of the autumn styles. As Nature varies her hand-writing, and gives four editions, so does fashion assume new forms, shades and colors. Summer brings everything light, airy and beautiful. Autumn puts on a richer, heavier garb, warm colors and rich trimmings.

For several years, black and the most sombre shades have been worn exclusively. Old and young, mother and child, have all worn the darkest shades. This season the greatest change has taken place in colors. All the dead tints of past seasons have entirely vanished. Brown is no longer the almost seal black; but a real leaf, or snuff, or yellow-brown. Blues are now the old-time mazarine, Marie Louise and bright indigo. Green is in leaf, myrtle, apple and moss shades. Red—well, every shade worn for years is popular now. Thiers red, which is a rich, deep garnet, will supersede the favorite of long-standing cardinal.

This tint will be used for out-door costumes; also for bonnets, ribbons, in flowers, feathers and for ties.

Under the head of fabrics we name the old-time stand-by, cashmere; some is very light in quality. Another brand is heavy enough for wraps. Camel's hair comes smoother and softer than ever before. Then there are stripes, and checked and basket-woven material, spotted with gold, silver, bronze or red. Scotch plaids in wools are largely imported; they will be used for costumes, and also enter largely into trimmings and parts of costumes. Combinations will still be used, which news will gladden some hearts. Indeed, some of the new costumes show three fabrics and colors.

Many are wondering what will be the prevailing style—basques and over-skirts, polonaises and skirts, or the Princesse. In this matter every taste can be suited, as all of them will be worn.

The pleated blouse waist, so popular through the summer, will still hold its place. This is a becoming style to slender figures.

This model is used for cheap materials, and also for elegant silks. Simplicity is sought after in the dressing of misses—so much so that they can easily make their own dresses at home; they are no longer a work of art. Cloaks will be of medium length. Twelve to fourteen inches from the bottom of the skirt in front will be the longest, and many much shorter, to show the handsomely-trimmed skirts beneath. In trimmings there will be elegant fringes, handsome passamenerie both beaded and without. Heavy cords and tassels and most elaborate buttons will be used.

The woman's friend—the short dress—will be in greater favor than ever; no woman can afford to be without one; they are to her what a gentleman's business suit is to him—perfectly indispensable. Then they can be modeled out of one or two old suits, which have done service as train dresses. There is so much license allowed in dressing this season that all tastes and figures can be suited.

MINNIE MAY.

RECEIPTS.

APPLE TRIFLE.

Scald as many apples as when pulped will cover the dish you design to use to the depth of two or three inches. Before you place them in the dish add to them the rind of half a lemon, grated fine, and sugar to the taste. Mix half a pint of milk, half a pint of cream, and the yolk of an egg; scald it over the fire, keeping it stirring, but do not let it boil. Add a little

sugar, and let it stand till cold; then lay it over the apples, and finish with the cream- whip.

APPLE FRITTERS.

Pare, core, and parboil some juicy tart apples in a very little water; chop fine. Beat seven eggs very light, and add to them slowly three-quarters of a pound of sifted prepared flour. Beat very light; put in apple rind and juice of a lemon. Have the grated lard at a perfectly boiling point, and put in it a thick slice of raw apple; this subdues the strong odor of the fat. But a large spoonful of the batter in at a time, and as many spoonfuls as the pan will hold. They must be made at the moment you wish to use them, and sent to the table at once,—each panful sent in as quickly as baked. Powdered sugar, with cinnamon and nutmeg in it, is nice for them.

MARY NASH.

Old boot-tops, cut into pieces the right size and lined, make excellent iron-holders. The leather keeps all heat away from the hand.

TO CLEAN SMOKY MARBLE.

Brush a paste of chloride of lime and water over the entire surface. Grease spots can be removed from marble by applying a paste of crude potash and whiting in this manner.

MOTHS IN CARPETS.

A good way to kill them is to take a coarse towel, and wring it out in clean water. Spread it out smoothly on the carpet, then iron it dry with a good hot iron, repeating the operation on all suspected places, and those least used. It is not necessary to press hard, heat and steam being the agents, and they do the work effectually on the worms and their eggs.

ASTOR HOUSE CORN BREAD.

One quart of buttermilk, two eggs, one teaspoonful of baking soda, two tablespoonfuls of melted butter; stir in meal until the mixture is about as thick as buckwheat batter. Bake in square tin pans, about an inch thick, half an hour in a hot oven.

CROQUETTES OF FOWL OR MEAT.

Mince the meat finely, removing the skin and bones, and fry four small onions in one tablespoonful of butter until brown, then mix them together and dredge the whole with one tablespoonful of flour, and add pepper, salt, and ground mace or nutmeg at pleasure. Beat two eggs with one tablespoonful of powdered sugar, and stirring lightly through the mass, set it away until cold. Then make into oblong balls the size of a large pigeon's egg; dip each one in beaten egg and then in crumbs rolled very fine; fry a rich brown in plenty of boiling lard, butter, or dripping, and serve on a bed of mashed potato, with a light feathery border made by quickly grating a boiled potato directly on the platter.

JENNIE.

QUINCE JELLY.

Rub the quinces with a cloth until perfectly smooth, cut in small pieces, pack tight in kettle, pour on cold water until level with the fruit, boil very soft; make a three-cornered flannel bag, pour in fruit and hang up to drain, occasionally pressing on the top and sides to make the juice run more freely, taking care not to press hard enough to expel the pulp. There is not so much need of pressing a bag made in this shape, as the weight of the fruit in the larger part causes the juice to flow freely at the point. To a pint of juice add a pint of sugar and boil fifteen minutes, or until it is jelly; pour into tumblers, or bowls, and finish according to general directions. If quinces are scarce, the parings and cores of quinces with good tart apples, boiled and strained, as above, make excellent jelly, and the quinces are saved for preserves.

MRS. W. W. WOODS.

SOOT AND SALT.

As the days approach when the stove must be brought from its Summer retirement, it is well to remember that salt will remove soot from carpets. Brush the soot off as much as is possible without rubbing it into the threads of the carpet, then scatter salt and sweep with a stiff broom.

SIMPLE SPONGE-CAKE.

Beat one and a half cups of sugar and two tablespoonfuls of butter to a cream, then add two eggs well beaten, one cup of milk, and two tea-

spoonfuls of baking-powder sifted with three cups of flour; flavor with lemon.

MAGGIE MANNING.

RED-PEPPER CATCHUP.

Cut up ripe peppers and place them in a preserving-kettle until it is full, then cover with the best cider-vinegar, and boil until the peppers have dropped to pieces. After removing from the fire, as soon as the sauce is cool enough I rub through a wire-sieve. In my opinion it is much better without salt or other condiments, and is of a beautiful scarlet color, and so thick that it must be put up in large-mouthed bottles or jars. It will keep fresh for years. Should boil slowly for at least four hours.

AUGUSTA.

COTTAGE PUDDING.

One cup of white sugar, half a cup of butter, two eggs, two-thirds of a cup of milk, one teaspoon of soda, two of cream-of-tartar, and three of flour. Sauce—one cup of sugar, half a cup of butter, and one tablespoonful of corn-starch. Mix together, and add two cups of boiling water; boil two or three minutes, and add wine, brandy, or any flavoring you choose. The success of this pudding depends upon the sugar, butter, and eggs being well beaten, and upon being served the instant it is done.

HOUSE-GIRL.

Things Worth Knowing.

1. That fish may be scaled much easier by dipping into boiling water about a minute.
2. That fish may as well be scalded, if desired, before packing down in salt.
3. That salt fish are quickest and best freshened by soaking in sour milk.
4. That milk which is turned or changed may be sweetened, and rendered fit for use again, by stirring in a little soda.
5. That salt will curdle new milk; hence, in preparing milk-porridge, gravies, etc., the salt should not be added until the dish is prepared.
6. That fresh meat, after beginning to sour, will sweeten if placed out of doors in the cool over night.
7. That clear boiling water will remove tea stains and many fruit stains. Pour the water through the stain, and thus prevent its spreading over the fabric.
8. That ripe tomatoes will remove ink and other stains from white cloth; also, from the hands.
9. That a teaspoonful of turpentine boiled with your white clothes will aid the whitening process.
10. That boiled starch is much improved by the addition of a little sperm, or a little salt, or both, or a little gum-arabic dissolved.
11. That beeswax and salt will make your rusty flat-irons as clean and smooth as glass. Tie a lump of wax in a rag, and keep it for that purpose. When the irons are hot, rub them first with the wax-rag, then scour with a paper or cloth sprinkled with salt.
12. That blue ointment and kerosene, mixed in equal proportions and applied to bedsteads, is an unfailing remedy for bugs, as is a coat of white-wash for the walls of a log house.
13. That kerosene will soften boots or shoes which have been hardened by water, and render them as pliable as new.
14. That kerosene will make tin tea-kettles as bright as new. Saturate a woolen rag and rub with it. It will also remove stains from clean varnished furniture.
15. That cool rain-water and soda will remove machine-grease from valuable fabrics.—*Ec.*

To cure the boys who are in "the colt period" of "hanging their hats on the floor," place a box or bag in a convenient place, and whenever anything is left out of place whoever sees it can put it in the box or bag. The owner, when he wants it, must pay a forfeit by doing something, having it understood just what the forfeit is for each one—writing a sentence upon a slate, or learning or reciting a verse of poetry, or passage of Scripture—anything that will take a little time when the boys are in a hurry for hat or books, or whatever the article may be.

Perhaps some readers would like to learn the secret of walking erect. When walking, try to attain the habit of carrying the palm of your hand forward, with the little finger next to your body.

The Hour of Dinner.

O, hour of all hours, the most blessed upon earth,
Blessed hour of our dinners! The land of his
birth,
The face of his first love, the bills that he owes;
The twaddle of friends, and the venom of foes;
The sermon he heard when to church he last went,
The money he borrowed, the money he spent,—
All of those things a man, I believe, may forget
And not be the worse for forgetting, and yet
Never, never, oh never! earth's luckiest sinner
Hath unpunished forgotten the hour of his dinner.
Indigestion, that conscience of every bad stomach,
Shall relentlessly gnaw and pursue him with some
ache,
Or some pain, and trouble, remorseless, his best
case,
As the Furies once troubled the sleep of Orestes.

We may live without poetry, music and art,
We may live without conscience and live without
heart,
We may live without friends, we may live without
books,
But civilized man cannot live without cooks.
He may live without books,—what is knowledge
but grieving?
He may live without hope,—what is hope but de-
ceiving?
He may live without love,—what is passion but
pining?
But where is the man that can live without dining?

Take Care of the Pets.

WILLIE WINTER'S WHITE MICE.

"Willie, Willie, look here! If you leave your
mice about like this you'll have them die, you
know. The idea of your leaving the poor little
things out in the garden, and in the rain, too!
What could you have been thinking about?
Why, if I hadn't happened to go out just as I did
they would have been left there all night, I do be-
lieve; and if the cold and wet hadn't killed them
the cats would!"

The speaker was Willie's eldest sister Rachel,
who now handed him the cage all dripping wet.

"Oh my!" said Willie; "I forgot all about
them. But I should have thought of them
presently; besides, it didn't rain when I was out
there."

"Well, but rain or no rain, how careless it is
of you!" returned his sister. "And as to your
thinking of them presently, I'm afraid you would
have gone to bed without another thought about
them. You really ought to be more careful; you
ought indeed!"

Willie felt that he had no answer to make to
his sister's reproof, so he took the cage without a
word, and put it safely away in its place for the
night.

Do you think his sister's rebuke made him more
thoughtful in the future? I am sorry to say it did
not.

It was only a few evenings after this conversa-
tion that, just before he went to bed, after playing
with his mice all the evening, he took them out
into the outhouse to place them on the top shelf as
usual, out of the way of the cat. But when he
got there, he found that the chair which he used
to stand upon in order to reach the shelf was
covered with chips of wood and tools that he had
been doing something with earlier in the even-
ing. He put down the cage on the ground to
clear the chair, and having done so, went away
with his usual thoughtlessness, and forgot all
about his mice.

His sister and his mother were both busy up-
stairs, and it was not till a good while after Willie
had gone to bed that Rachel said—"I wonder
whether Willie put his mice away safely? I sup-
pose I had better go and see; he is so very care-
less."

She took a candle and went down. And what
do you think she saw? The cage upon the floor,
and the cat with one mouse in her mouth, and
the other lying dead beside her. She must have
slipped in as Willie went out, and finding the
cage on the floor, scratched at it and knocked it
about until she got the door open and secured her
prey.

Of course Willie was dreadfully shocked when
he discovered the fate of his pets. He felt that he
had been guilty of a grievous fault, for the little
creatures had been taken under his care and pro-

tection, and it was his duty to see that no harm
befell them.

Whether he ever had any other pets I do not
know; but if he did, let us hope that he was more
thoughtful and careful of them than he was of his
white mice.

Rules for Ladies Traveling Alone.

1. Before starting on a journey, familiarize your-
self with the route, and with names of good hotels
at the various stopping-places.
2. Never travel with just enough money, but al-
ways carry enough to provide for any possible
emergency. This will save much anxiety.
3. Wear but little jewelry, and keep the large
part of your money in some inside pocket, out of
sight (the trouble of the lady lately taken from a
train by two ruffians on the pretense that she was
insane, came partly from wearing valuable
jewelry).
4. Always look after yourself, and do not allow
a stranger to procure your tickets or checks for your
baggage.
5. Avoid, if possible, making changes in car by
night, but when unavoidable, go with others. Do
not become separated from the crowd.
6. Take no hacks, but go in an omnibus, where
there are other people. These are perfectly safe.
7. If any doubt as to changing cars, checking
baggage, etc., inquire in advance of the conductor.
The conductors on our trains are always polite and
willing to be of service, especially to women travel-
ing alone.
8. Do not wait till about to make some change
in train before inquiring of the conductor, for, ten
to one, he will then be hurried and you will only
half inform yourself; and finally,
9. Under all circumstances, endeavor to retain
presence of mind. One who can do this will have
no trouble in traveling, and, instead of it being
unwise for women to travel alone, I think it an
advantage to make trips alone, for there are few
people who are not at times obliged to do so, and
experience does away with much of the possible
danger in traveling.

Carving a Turkey.

The turkey, though looked upon as the king of
the poultry yard, is not by any means a subject
that calls for a very unusual amount of skill on the
part of the carver. Beyond the fact that care
should be taken to cut neatly a succession of long
slices from the breast, each with its nice little edge
of untorn skin, there is really not much for the
knife and fork to do. Yet the dish, roast or boil-
ed, is so universally met with during winter festi-
vities, that very seldom can the responsibility,
sooner or later, of carving it be evaded. There-
fore, it is as well to say that the cutting of the
slices from the breast should begin from as close to
the wing as possible, and so proceed upward on
both sides, to the ridge of the breast bone. Some
people prefer exactly to reverse this process; but
is not important to my thinking, for the carver,
like every other artist, must have his particular
mode of setting to work, and so long as he makes
the most of the bird before him, and puts upon
every place a tempting, toothsome-looking morsel,
he does nearly all that is demanded of him. But
this not a little, let it be remembered; for it is ex-
tremely easy to cut up a turkey into the most un-
gainly and unattractive-looking "hunks." The
stuffing under the breast is got at precisely as
described in the case of the duck. The severing
of wings and legs is only on rare occasions neces-
sary at the table, as the breast of the bird usually
yields an ample supply for an average number of
guests. But in the event of the carver being called
on to disjoint a leg or wing, he will only have
to draw upon his acquaintance with the anatomy
of the chicken. When, on the following day, the
remains of a turkey appear at lunch or otherwise,
the cook should have made any carving of the dish
unnecessary.—*N. Y. Herald.*

Household Furniture.

Experience tells us that furniture will be more
likely to prove satisfactory if simple and graceful,
rather than elaborate and extravagant in design.
There is no economy in buying inferior, ill-made
articles because they are cheap. They will either
get to look shabby or will need repair in a very
short time, and in the end will prove the more ex-

pensive. All articles of furniture should, in size,
material and shape, be suited to their position and
surroundings—and they should harmonize well
with each other. Excepting in very large rooms,
or in conformity with a fixed idea, large patterns,
extravagant designs and striking colors, should be
avoided. Subdued (but not dingy) colors and
small patterns are much safer than large masses of
color, and the brightness of the room should de-
pend rather upon the table-covers, books, flowers
and other ornaments, than upon the color of the
carpets and curtains. Large furniture is out of
place in a small room; slight, spare furniture is not
suited to a large room. The designs for carpets and
floor-cloths should be adapted for horizontal sur-
faces and for being trodden on. In a dining-room
the patterns and colors should be rich, deep and
warm. In a drawing-room they should be light
and delicate. When they have a motherly aspect,
the colors in the dining-room should not be too
dark or sombre; in the drawing-room they should
not be cold. Bed-rooms should be bright, airy and
cheery. In all the rooms the furniture should not
be too much crowded, and stiffness should be
avoided as much as possible.

How to Keep a Piano.

The piano is constructed almost exclusively of
various kinds of woods and metals, cloth, skin and
felt being used in the mechanical portion. For
this reason atmospheric changes have a great effect
on the quality and durability of the instrument,
and it is necessary to protect it from all external
influences which might affect the materials of
which it is composed. It must be shaded from the
sun, kept out of a draught, and, above all, guarded
against sudden changes of temperature. This lat-
ter is a most frequent cause of the piano getting
out of tune, and the instrument should be kept in
a temperature not lower than fifty-four degrees
and not higher than eighty-six degrees Fahrenheit.
When too cold, the wood, cloth and skin swell,
and the mechanism works badly; when too warm,
these materials shrink and cause clinking, squeak-
ing, and other disagreeable sounds. Moisture is
the greatest enemy of the piano, and it cannot be
too carefully guarded against. In a short time
damp will destroy every good point in the instru-
ment. The tone becomes dull and flat, the wires
rusty and easily broken, the joints of the mechan-
ism stiff, and the hammers do not strike with pre-
cision, and if these symptoms are not attended to
at once, the piano is irretrievably spoilt. There-
fore do not put your piano in a damp ground-floor
room, or between two windows, or between the
door and the window where there is a through
draught. Never leave the piano open when not in
use, and above all when the room is being cleaned.
Do not put it near a stove, chimney, or hot-air
pipes. Always wipe the keys after playing.
Never pile books, music, or other heavy things on
the top. Be careful when using the soft pedal not
to thump the notes. Do not allow five note or
other exercises of a small compass on a piano you
have any re ard for. A leather cover should be
kept on the instrument when not in use, and re-
moved every day for the purpose of dusting. A
cushion of wadding or a strip of flannel laid on the
keys will help to keep them white and preserve
the polish. Never leave the piano open after a
musical evening or dance. If you are obliged to
have it in a damp room do not place it against the
wall, and raise it from the floor by means of insu-
lators, and always cover it after playing. Employ
the best tuner you can get, and, if a new instru-
ment, let it be tuned every two months during the
first year, and at least three times a year after-
ward. Always have it tuned after a soiree if the
room has been very hot.

Answers to Correspondents.

MAGGIE M.—To press your autumn leaves take
an old book, lay down your leaves upon one page,
be careful that they do not touch each other, then
turn a dozen pages or so upon them, fill the next
page in the same manner, then place in a cool, dry
room with a weight upon them. We like leaf
varnish better than wax. The proper varnish is
sold by all druggists.

JENNIE C.—The book you mention can be ob-
tained at almost any book-store. In using cretonne
or chintz for curtains the light side should be in
the room. It is customary to line each curtain
with colored silesia, buff, blue or rose-color to
match the ground of the chintz; and this makes a
pretty show on the outside.

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES,—This is a bit of advice which my old school-master gave to the scholars at school. It came back to me all at once the other day as I was watching a plump little darkey eating a sour apple and making a very wry face—a "sardonic" grin. The old master said:—Whenever you come across a word you do not thoroughly understand, do not rest until you have found out all about it. There is "sardonic" for instance. As applied to a grin it means one that a man makes if he is forced to laugh when he doesn't want to, or tries to smile when he is ready to cry out with pain. Now, in the island called Sardinia there used to grow a plant with a very disagreeable taste, and whenever a piece of it was put into anybody's mouth it made his face pucker up into a broad, unwilling smile—made him "laugh on the wrong side of his mouth" as I've heard boys say. Well, in course of time the name of the island was given to the plant, and then with a slight change it was used to describe the wry face the taster made. So you see, my dears, some words are like puzzles. Maybe you have heard all about this before, and in reading this may give a "sardonic" smile at your old Uncle Tom's version of it.

UNCLE TOM.

Office Receipts.

We are in receipt of one of Mrs. Frances Hodgkin Burnett's famous novels called "That Lass O' Lowrie," published by Scribner & Sons. It is needless to say the authoress has taken her place as one of the best novelists of our time. Her stories can be profitably read by all classes of people. They are told not only with true art but deep pathos.

Answers to Enquiries.

GERTIE H. — We do not give prizes for answering puzzles unless specially mentioned.—We merely publish the name of the one who answers the most puzzles each month.

PUZZLES.

95.—COMPLETE DIAMOND.

The centrals of the diamond are each the same word, of five letters, spelling the name of a Frenchman who became notorious during the great French Revolution. The remainder of the diamond is made of words formed from the letters of his name. The diamond encloses a hollow-square, either of whose perpendiculars or horizontals, read backward or forward, will spell a word; and, reading from the middle letter to either end of either of the centrals, a word will be spelled, which, when read backward, will spell another word. Make the diamond. TREBONIUS.

96.—EASY AMPUTATED QUOTATION

Two lines from Tennyson. Each word is beheaded and curtailed.

—RU— —EART— —R— —OR— —HA—
—ORNET—
—N— —IMPL— —AIT— —HA— —ORMA—
—LOO— C. L. D.

97.—EASY CROSS-WORD PUZZLE.

My first is in bee, but not in fly;
My second in moon, but not in sky;
My third is in scare, but not in fright;
My fourth is in top, and also in kite;
My fifth is in broad, but not in wide;
My sixth is in ocean, but not in tide;
My whole is all New England's pride.
H. A. S.

98.—EASY SQUARE-WORDS.

I. 1. A band of singers. 2. A wandering troop of barbarians. 3. A plant with sweet-smelling root. 4. A simpleton. 5. Is quiet.
II. 1. A spelled number. 2. A lazy person.

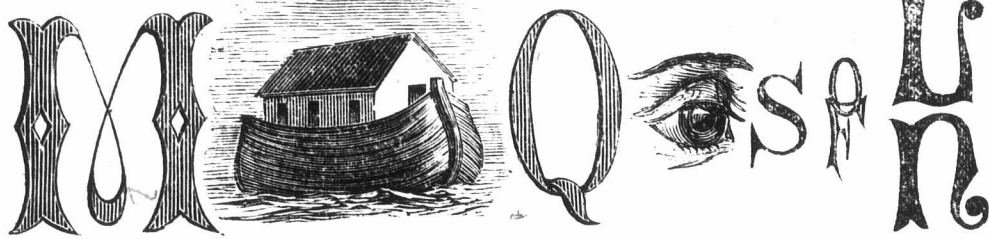
3. A dazzling light. 4. A marsh bird. 5. A river of England.
III. 1. Profundity. 2. To try. 3. A sacred song. 4. A claw. 5. Poems.
IV. 1. A noise that no animal but man can make. 2. The name of a letter of the Greek alphabet. 3. Part of a shoe. 4. A town of Belgium. 5. Deer. A. + B.

99.—GEOGRAPHICAL ENIGMA.

I am composed of 20 letters:
My 10, 17, 1, 7 is a river of Asia.
My 17, 15, 4, 9, 12 is a city of Ohio.
My 2, 12, 4, 15, 18, 9 is a lake of N. A.
My 11, 4, 13, 16, 18, 7, 12 is a peninsula of Europe.
My 9, 3, 18, 12, 2, 6, 9 is a river of S. A.
My 4, 2, 14, 9, 12, 4, 2 is a city of Canada.
My 7, 3, 4, 18, 6 is an ocean.
My 12, 2, 14, 4, 20 is a sea on the coast of Europe.
My 15, 4, 2, 13, 16, 18, 7 is a town of Ohio.
My 4, 13, 4, 3, 15 is a mountain of Europe.
My 13, 8, 18, 6, 15 is a bay of S. A.
My 6, 20, 18, 10, 18 is a country of S. A.
My 6, 13, 3, 8, 2, 16, 10 is a county of Illinois.
My 12, 18, 10, 17 is a river of Africa.
My whole is a State and its capital.
ROSA A. FROST.

100.—ENIGMA.

Upon the fish's back I ride,
Deep in the blue Atlantic wide;
My form is round, and is as bright
As burnished silver to the sight.
Beside the bales of merchandise
I'm found of varied form and size;
In fact, in all the ways of trade
Men very often need my aid.
In music, too, a place I claim,
And all musicians know my name.
Now, as you strive the word to tell,
I will inscribe the word "farewell."



101.—ILLUSTRATED REBUS.

Wh - r - r - n - w th - h - p - s I v - ch - r - sh - d. Fill the blanks with vowels, and find a song from the Opera of Norma.

102.—DROP-LETTER PUZZLE.

103.—GEOGRAPHICAL ENIGMA.

I am composed of 31 letters:
My 17, 9, 24, 14 is a river in England.
My 20, 13, 26, 7, 15, 11 is a large town in France.
My 6, 12, 25, 10, 31, 3, 19, 1, 28 is a cape on the west coast of Europe.
My 16, 18, 20, 21 is one of the United States.
My 22, 20, 14, 27, 3, 13 is a river that empties into the Georgian Bay.
My 5, 23, 15, 3, 30, 2 is a county in Ontario.
My 4, 25, 14, 20, 26, 11, 8 is a mountain peak in Asia.
My whole is a proverb that is very often verified.
P. N. B.

104.—RIDDLE.

There is in, on, and round this earth
A Power clothed with light,
A wonder-working, airy thing,
Yet neither fiend nor sprite.
Man feared, then chained, this dreadful Power
By force of stronger law;
Oft dazzled by its raiment bright,
Its self man never saw.
Now, tamed and harnessed, it is sent
On errands night and day;
It tells ten thousand messages,
Yet not a word can say.
It travels through the ocean's deep,
Green valleys still and dim;

'Tis fleetest than the fleetest fish—
And yet it cannot swim!

It pierces through the soundless seas,
And slips beneath the sky;
But though it passes through the air,
It has no wings to fly.

And while it cannot walk, nor talk,
Nor eat, nor drink, nor sleep,
There's scarce a thing in all the world
Has made more people weep.

Than any herald on this earth
It has a fletter fame.
Now, just put on your thinking-cap
And tell me what's its name.

Answers to October Puzzles.

No. 96.— TIGER CLOVE I N D I A
G E M I V Y A I M
R E A

97.—DOUBLE WORD-SQUARE.

Across:—1. Gone. 2. Aver. 3. Leer. 4. Ends. Down:—
1. Gale. 2. Oven. 3. Need. 4. Errs.
88.—Bridle.
89.—1. F-oil. 2. S-pear. 3. F-eel. 4. S-lodge. 5. S-tag.
6. B-one. 7. G-oats. 8. B-raw. 9. G-alley.
90.—1. Subtle, Bustle. 2. Shah, Hash. 3. Shearer, Hearers.
4. Sharper, Harper. 5. Resorted, Restored.
91.—1. B-eat. 2. C-andy. 3. S-he, Y-our. 4. T-able. 5. P-ink. 6. S-cent. 7. B-rain. 8. O-range. 9. S-kate. 10. H-elm. 11. C-row. 12. H-ash. 13. B-owl. 14. S-care. 15. B-rush.
92.—Diamond.
93.—1. Brass, bass. 2. Bread, bead. 3. Chart, cart. 4. Clover, cover. 5. Crane, cane. 6. Farce, face. 7. Horse, hose. 8-9. Mouse, muse. 10. Peony, pony.
94.—Provincial Exhibition in Toronto.
95.—"But, O! for the touch of a vanished hand,
And the sound of a voice that is still."
Tennyson's "Break, break, break."

Names of Those Who Sent Correct Answers to Oct. Puzzles.

Robt. Bowes, Sarah Miller, Harry P. Smith, Maggie Manning, Miss Carlisle, Joseph Hepworth, Charles Wright, Dan. H. Burritt, Annie and Ella Walker, Mrs. Whitesides, John H. Stephenson, Jas. Bennet, Susannah Richardson, D. A. Ghent, J. H. C., Amelia G. Palmer, L. F. Hardy, George Woodhouse, M. J. Davis, John J. Shier, Catherine E. Guest, Jeannie Laird, Lillian M. Osborne, Henry Cowie, R. Rennie, William Wood, W. Dale, C. W. Warren, J. Sanely, James L. Brown, Ellie Beatty, E. L. Moin, Amos Fowkins, Geo. Kerpost, H. J. Fry, Estie Armstrong, R. French, John Scott, Minnie Hyde, Mary Johnston, S. Sutherland, George West, M. Sanburn, Mathew Doyle, Alice Dunn, C. B. Carr, Sarah Duffield, J. R. Fraser, Mrs. Alonzo Fick, Amanda Norris, C. T. Duke.
We take pleasure in announcing that Amanda Norris is victorious, having answered the greatest number of puzzles correctly.

The Snow-bird.

BY DORA READ GOODALE.

When the leaves are shed,
And the branches bare,
When the snows are deep,
And the flowers asleep,
And the Autumn dead,
And the skies are o'er us bent
Gray and gloomy, since she went,
And the sifting snow is drifting
Through the air;

Then, 'mid snow-drifts white,
Though the trees are bare,
Comes the snow-bird, bold
In the Winter's cold;
Quick, and round, and bright,
Light he steps across the snow,
Cares he not for winds that blow,
Though the sifting snow be drifting
Through the air.

Scribner for November.

Some men mourn that they have made and broken so many resolutions. It is sad that you have broken them, but thank Heaven that you made them.

The Art of Reading.

In one of his speeches the great Macready said "that it would not be out of place if he made some reference to the art by which they endeavored to convey to their hearers not only the words, but the inner feelings of the heart. It might appear to some that he set too high an estimate in dignifying that as an art in which no one confessed a deficiency. Every one could read; but he asked, could every one listen to their reading. For his own part, one of the greatest of intellectual luxuries, was to listen to the powerful reading of the eloquent utterances of their great writers. Let him put in a word for reading as an accomplishment which required as much time and practice for its acquirement as the music of their first composers." From this high authority we are enabled to determine the position which elocution holds among the other professions and accomplishments. Ranking equal with music in point of time necessary for acquirement, and in artistic merit; and the profession is dignity and importance.

The art of reading may be understood as that system of rules which teaches us to pronounce written composition with justness, energy, variety and ease. Agreeably to this definition, reading may be considered as that species of delivery which not only expresses the sense of the author, so as barely to be understood, but which, at the same time, gives it all the force, beauty and variety of which it is susceptible. Not a mere mechanical rendering, but in every word there should dwell a living spirit.

In many of our present readers we find a false tendency. Educated it may be in the theory, their hearts are not taught to act, nor are their imaginations developed to the full requirements of the art. They utter mechanically the words before them, with a possible pleasing effect upon those who are capable of judging the true merits of the rendering, but with an ordinary critic it must be considered the simple jangle of a machine. We can pay no greater compliment to such readers than that their popularity will never extend beyond a certain point, which is the limit of their circle of friends.

In elocution we find a grand and noble study; one which develops our higher and better nature, and sheds its influence through body and soul. The young man who studies elocution at the same time studies nature, and obtains a grand insight into its many mysteries. To some it might seem long and tedious, but to the poetic nature it is pleasing and profitable, and to all it much more than compensates for the time and labor expended in its acquirement.

In social life we find both its origin and perfection, inasmuch as conversation may be regarded as the foundation of our speech. It is the germ whence must issue all the powers of expression within the possibility of our nature. We come in contact with our friends in voice and manner. It is here our thoughts and feelings come into service. We render ourselves agreeable to our friends largely as our voice and manner are pleasing and attractive. Our influence and usefulness in any social relation must then depend upon the culture of these qualities.

Let me add a word to its importance as an accomplishment. We find many who study the art of music as an accomplishment; but how many do we find who study the art of reading for the same purpose? In the home circle, in the social group, and even on the platform its power and influence are enduring. We never tire of listening and enjoying its pleasing effect, and are many times surprised at the intensity of expression to which the voice and heart can be cultivated. We have noticed that in the social circle, readings are sought and valued as highly as the renderings of the best musicians.—[Homestead.

Farm Life.

It is a common complaint that the farm and farm life are not appreciated by our people. We long for the more elegant pursuits, or the ways and fashions of the town. But the farmer has the most sane and natural occupation, and ought to find life sweeter, if less highly seasoned, than any other. He alone, strictly speaking, has a home. How can a man take root and thrive without land? He writes his history upon his field. How many ties, how many resources he has; his friendships with his cattle, his team, his dog, his trees; the satisfaction in his growing crops, in his improved fields;

his intimacy with Nature, with bird and beast, and with the quickening elemental forces; his co-operations with the cloud, the sun, the seasons, heat, wind, rain, frost. Nothing will take the various social distempers which the city and artificial life breed, out of a man like farming, like direct and loving contact with the soil. It draws out the poison. It humbles him, teaches him patience and reverence, and restores the proper tone to his system.

Cling to the farm, make much of it, put yourself into it, bestow your heart and your brain upon it, so that it shall savor of you and radiate your virtue after your day's work is done.—Scribner.

A Healthful Practice.

Loosen the clothing, and standing erect, throw the shoulders well back, the hands behind and the breast forward. In this position draw slowly as deep an inspiration as possible, and retain it by an increased effort for a few seconds; then breathe it gradually forth. After a few natural breaths, repeat the long inspiration. Let this be done for ten or fifteen minutes every day, and in six weeks' time a very perceptible increase in the diameter of the chest and its prominence will be evident.



Chrysanthemum Coronarium "Flore Pleno."

The Chrysanthemum is one of the prettiest late autumn and early winter flowers grown. In November and December there is nothing that will make such a cheerful display. They are mostly all of fall growth, and should therefore be well thinned out in the beds in order to have them look well. The best way is to get young plants in the spring and sink the pots into the soil up to the rim. Take them into the house in October or November, and you will have a fine display of bloom for two or three months. There are different classes of Chrysanthemums, white, different tints, and yellow, and different shades of red, and in order to get good double flowers the best of seed should be procured and sown in a fine loamy soil, and when a few inches high transplant in such a way as will suit your own taste either in pots or in the open ground; the best way is in pots. The plant being quite hardy, can be grown without any difficulty.

This interesting flower has not received half the attention in this country that it deserves.

FRUITS are of different degrees of digestibility. Those of a hard texture, as some kinds of apples, melons, apricots, several sorts of fleshy plums, and all immature fruits, are difficult of digestion. But strawberries, raspberries, currants, gooseberries, cherries, peaches, nectarines, bananas, melting pears, mulberries, figs, grapes, melons and apples, when fully ripe, are most easily dissolved in the stomach. Yet there is nothing that equals good ripe apples—they take the place of food, and produce brain and muscle. All ripe fruit moderately eaten is wholesome, particularly as correcting the grossness of animal food; but an excess of it may be productive of numerous diseases, and nettle-rash on children is often thus occasioned. So you see there is nothing so good but that we may have too much of it, notwithstanding the saying: "You cannot have too much of a good thing."

How We Came to Travel.

I was sitting on the deck of a Savannah steamship, which was lying at a dock in the East River, New York. I was waiting for young Rectus, and had already waited some time, which surprised me, because Rectus was, as a general thing, a very prompt fellow, who seldom kept people waiting. But it was, probably, impossible for him to regulate his own movements this time, for his father and mother were coming with him to see him off.

I had no one there to see me off, but I did not care for that. I was sixteen years old, and felt quite like a man; whereas Rectus was only fourteen, and couldn't possibly feel like a man—unless his looks very much belied his feelings. My father and mother and sister lived in a small town, some thirty miles from New York, and that was a very good reason for their not coming to the city just to see me sail away in a steamship. They took a good leave of me, though, before I left home.

Rectus's father and mother lived in New York. Samuel Colbert was his real name, and the title of Rectus he obtained at school by being so good. He scarcely ever did anything wrong, which was rather surprising to the rest of us, because he was not sickly or anything of the kind. After a while we got into the way of calling him Rectus, and as he didn't seem to mind it, the name stuck to him. The boys generally liked him, and he got on quite well in the school,—in every way except in his studies. He was not a smart boy, and did not pretend to be.

I went right through the academy from the lowest to the highest class, and when I left the professor, as we called our principal, said that I was ready to go to college, and urged me very much to do so. But I was not in any hurry, and my parents agreed with me that after four years of school-life, I had better wait a while before beginning a new course.

I thought over things a good deal for myself, and a few months after I left the academy I made up my mind to travel a little.

I had some money of my own, which I thought I would rather spend in travel than in any other way, and as it was not a large sum, and as my father could not afford to add anything to it, my journey could not be very extensive. Indeed, I only contemplated going to Florida and perhaps a few other Southern States, and then, if it could be done, a visit to some of the West India islands, and as it was winter-time, that would be a very good trip.

Soon after the matter was all planned and settled father had to go to New York, and there he saw Mr. Colbert, and of course told him of my plans. That afternoon old Colbert came to my father's hotel and proposed to him that I should take his son with me. He had always heard, he said, that I was a sensible fellow, and fit to be trusted, and he would be very glad to have his boy travel with me. And he furthermore said that if I had the care of Samuel—for of course he did not call his son Rectus—he would pay me a salary. He had evidently read about young English fellows traveling on the continent with their tutors, and I suppose he wanted me to be his son's tutor or something like it.

When father told me what Mr. Colbert had proposed, I agreed instantly. I liked Rectus, and the salary would help immensely. I wrote to New York that very night accepting the proposition.

When my friends in the town and those at the school heard that Rectus and I were going off together they thought it an uncommonly good joke, and they crowded up to our house to see me about it.

"Two such good young men as you and Rectus traveling together ought to have a beneficial influence upon the whole community," said Harry Alden; and Scott remarked "that if there should be a bad storm at sea he would advise us two to throw everybody else overboard to the whales, for the other people would be sure to be the wicked ones." I am happy to say that I got a twist on Scott's ear that made him howl, and then mother came in and invited them all to take supper with me the Tuesday before I started.—St. Nicholas, for November.

Little Boy—"Mamma, what relation is auntie's new baby to me?" Mamma—"Your first cousin, dear." Little Boy—"Well, ma, who is my last cousin?" (Ma collapses.)

Down:—
5. S-tag.
r. Hearers.
T-able, 5.
-kate, 10.
-care, 15.
t, cart. 4.
7. Horse,
and,
t, break."
Those at Cor-wers to dles.
arah Miller,
aggie Man-
sle, Joseph
es Wright,
Annie and
Whitesides,
nson, Jas.
ah Richard-
t, J. H. C.,
mer, L.
orge Wood-
e E. Guest,
R. Rennie,
o, James L.,
so, Kerpost-
otte, Minnie
est, M. San-
ah Duffield,
C. T. Duke.
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The Fireside.

BY C. P. CRANCE.

With what a live intelligence the flame
Glow and leaps up in sires of flickering red,
And turns the coal, just now so dull and dead,
To a companion! Not like those who came
To weary me with iteration tame
Of idle talk in shallow fancies bred,
From doleful moods the cheerful fire has led
My thoughts, which now their manlier strength re-
claim:
And like some frozen thing that feels the sun
Through solitudes of winter penetrate,
The frolic currents through my pulses run;
While fluttering whispers soft and intimate
Out of the ruddy fire-light of the grate
Make talk, love, music, poetry in one.

Peacock Fish, Peacocks and Little Boys.

They tell me that there is a kind of fish in the Indian seas called the peacock fish, because of his brilliant colors. I wonder if he is as proud as our land peacock, and whether or not he can spread his tail on grand occasions after the fashion of the bird that struts into my meadow sometimes? This bird lives on a fine estate near by, but once in a while he comes over to astonish us with his splendor. One night I dreamed that he came along, and had just spread himself and put on his grand airs, when ten little youngsters sprang from nowhere in particular, and began to point at him with shouts and laughter.

"Ho! ho!" cried they. "Isn't he proud? Ho! ho!"

A queer little stumpy-tailed dream-dog was with them, and he fairly sneered instead of barking. "Well!" exclaimed the peacock in the harshest voice you ever heard, "what if I am proud? Who'd ever see these tail feathers, I'd look to know, if I wasn't proud? Look out that you're not proud,—you that haven't a feather on your bodies, p-a-a-u-w!"

This was too much for the ten little boys. They gave a shout, and sprang upon the peacock, and each one tried to get a feather, but he gave a tremendous scream—

I awoke, and there was the sun, with every ray spread, rising to the tune of Cock-a-doodle-do!

Jack-in-the-Pulpit for November.

DEAR UNCLE TOM,—I have just arrived in England. When we were fairly out at sea, the first thing I did was to explore the great ship. It was four hundred feet long, made entirely of iron, and sunk twenty feet deep in the water. The masts were of hollow iron, and seventy feet high. It took nine furnaces and forty tons of coal a day to keep the ship going. The crew numbered a hundred and thirty-five. It seems very wonderful that a great heavy iron ship should not sink; the reason that it does not is that it is lighter than the water it displaces.

When we were a few days out a flock of land-birds rested on our ship. We fed them with crumbs, and brought dishes of fresh water on deck for them, but after a day or two they disappeared. A little further on, a hawk alighted on the vessel, and one of the sailors caught it when it was asleep.

To find out how fast we were going the sailors threw the "log," which was no log at all but a long thin rope with a small three-cornered canvas bag at one end. They throw out the bag and it catches in the water and keeps the end of the rope steady. The rope runs out as the ship goes. One sailor stands with a time-glass, which holds as much sand as will fall in one minute from one half of it into the other. The glass is turned just when a certain mark on the rope passes over the rail, and when all the sand is turned the rope is stopped. As the rope has lengths marked on it by its bits of colored cloth, the sailors can tell how far the ship has gone in one minute, and can roughly calculate from that its rate of speed by the hour. Formerly a real log of wood was used instead of the bag.

The greatest event of the voyage was seeing a school of whales. There were dozens of them spouting and showing their backs above water. Another exciting thing was meeting a ship so near that we could salute it, which is done by hoisting then lowering; the flag once or twice. Ships have flags of different kinds and each has its own mean-

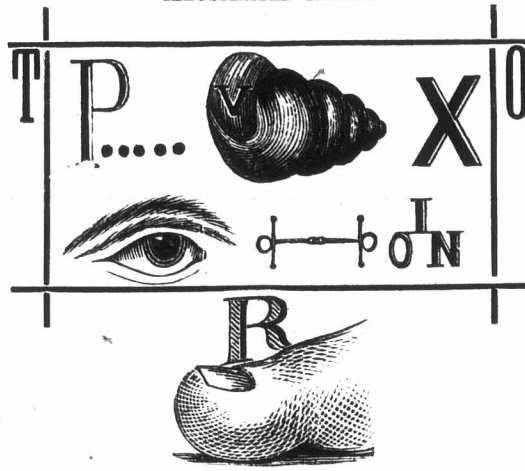
ing. So by hoisting certain flags the captains of different ships can exchange news.

When nearing the Irish coast a dense fog settled upon us, so that we could hardly see from one end of the ship to the other. All day and all night the great fog-whistle was kept blowing to warn other vessels that might be in our neighborhood. To see a light-house or landmark was impossible, but the captain found out where we were by soundings. Every ship has a long piece of lead with a hole in one end which is filled with tallow. The other end is fastened to a rope, and the lead is thrown overboard and sinks to the bottom. When hauled up some of the sea-bottom is found stuck to the tallow, and from this and the depth of the water the captain knows where he is, for the kinds of sand and mud at the bottom of the sea and the varying depths of water are plainly marked on his charts.

I cannot describe to you what a welcome sight the land was after seeing nothing but water for so long. But when we had left the great ship behind it seemed almost as if we were leaving home, glad though I was to get ashore.

Your loving reader, F. D.
London, England.

ILLUSTRATED REBUS.



Some of our readers have not amused themselves with the rebuses, while others have taken great interest in them. The above is inserted a third time for all to examine. There has arisen great dispute as to the correct answer; some contend that the answer is "Toronto Provincial Exhibition," others that it is "Provincial Exhibition, Toronto," and others say that it is "Provincial Exhibition held in Toronto"—some say "enclosed in Toronto." There have been wagers made about it, and lawyers differ in the answer. We have given the correct answer among the regular answers, because we made it and intended it to read thus. Some oppose this answer, and say that the Exhibition was not held in Toronto, but in the suburbs.

A Sharp Lawyer.

One of those shrewd, sharp lawyers, who take pride in twisting a witness into a labyrinth of difficulties, had occasion some time ago to cross-examine a gentleman of some little prominence. The lawyer managed after much skillful manoeuvring to so confuse the witness that the only answer he could obtain to his questions was, "I don't recollect."

When the lawyer had this answer returned to him a score or more of times his patience gave out. "Tell me, Mr. J.," he exclaimed, with biting sarcasm, "can you ever remember anything?"

"I can," was the response.

"Can you carry your memory back for twenty years and tell me a single instance that happened then?"

"Yes, I think I can," returned the witness, who had regained some composure.

"Ah!" exclaimed the lawyer gleefully rubbing his hands in orthodox legal fashion. "Now, that is counseling. Come, now, sir, what is this instance which you remember so well?"

"Well, sir, I remember that twenty years ago, when you were admitted to the Bar, your father came to me to borrow \$30 to buy you a suit that

you might make a presentable appearance at commencement, and I have a distinct recollection that your father never paid the \$30 back to me."

Confusion changed hands at this point of the proceedings, and the lawyer dismisses the witness without more ado.

The Philosophy of Strikes.

"Where are you going with the puppies, my little man?" asked a gentleman of a small boy, yesterday, whom he met with three pups in a basket.

"Goin' to drown them," was the reply.

"I want a pup for my little boy to play with; what do you say to letting me take one of them?"

"I'll sell you one," spoke up the little boy with true American enterprise. "I'll sell you this yaller one for half a dollar, the black one for 75 cents, and the spotted one is worth a dollar."

"I think my boy would like the spotted one best, but you ask to much for it. You had intended drowning all of them, but I'll give you 25 cents and save you the trouble of drowning the spotted one."

"Twenty-five cents for that spotted pup!" exclaimed the boy, "I can't stand it, taxes is high, rent is high, groceries is high, oil is down and going lower—oh, no; I can't take less than a dollar."

"But you intended to drown—"

"Take the black one at 75 cents."

"My little boy wouldn't like the black one."

"Take the yaller one at half a dollar, and he's dog cheap."

"I don't like his color."

"Well, then, you had better tell your little boy to play with his toes," and he continued on his way to the river, remarking that "No party can dead-beat his way on me these hard times."—
[Oil City Derrick.]

One Day!

Give me joy, give me joy, O my friends,
For once in my life has a day
Passed over my head and out of my sight,
And my soul has naught to unsay.
No querulous word to the fair little child
Who drew me from study to play;
No murmuring word to the beautiful wife,
The angel who walks by my way;
No snappish reply to the hundred and one
Who question me gravely and gay,
No angry retorts to those who misjudge
And desire not a nay, but a yea;
No word to the beggar I fain would take back
No word to the tenant at bay;
No word, though I know I remember them all,
Which I would, if I could, e'er unsay.
Give me joy, give me joy, O my friends,
For the patience that lasted all day!

Steamboat and Grist-mill in One.

Mr. Miller, of Little Current, has on the stocks a steamboat unsurpassed for design and ingenuity. It is designed to serve not only as a steamboat for the conveyance of passengers and freight, but also as a grist-mill. The machinery of the steamboat will be, as in ordinary propellers, near the stern, while a space of twenty feet of the forward part will be partitioned off and fitted for the grist-mill, the power being supplied by belting from the engine at the stern. Mr. Miller, judging that there is not traffic enough between the ports to afford full employment to a steamboat, intends to add milling to steamboating. He will give due notice to the farmers of the locality of his coming so that they may have their grists ready on his arrival. Having completed his business at one port he will start with passengers and freight to another, and during the trip from one to the other he will grist the wheat he has received for toll. When the steamboat is laid up for the winter the mill, he hopes, will be occupied, so there will be no long season of inactivity. The enterprise will, we hope, prove profitable to Mr. Miller, as it will be one of great convenience and advantage to the farmers and other settlers.

"The Unkindest Cut of All."—The Major—"Would you advise me to have those few hairs in front cut off?" Haircutter—"U—m—Well, sir, I should hesitate before I sacrificed my honny hornament!"

Miscellaneous.

A Farmers' Provincial Association.

Mr. P. McClaren, of Pushlinch, has introduced to the Farmers' Club of that progressing locality a system for establishing such an organization. We should be pleased to publish the plans and aid such an undertaking, and believe such would be of much benefit both to the Province and to the Dominion. We want more discussion on agricultural subjects. It is from open discussions and from hearing both sides of any question that good must come.

Mr. McClaren says:—"The farmer must study the causes that have led to the diminished returns from his labor."

The Provincial Ploughing Matches.

During the past month these matches have taken place in different parts of the Province. Perhaps one of the most successful features in them is the after-dinner speeches. When they are directed to agriculture they often bring forth discussions and lead to thought that tend to advance the interest and improvement in agricultural affairs.

Provincial Exhibition—Nova Scotia.

This, as well as the other Provincial Exhibitions, has been very successful. An immense number of visitors assembled at the exhibition building. With other visitors were present the Lieut.-Governor of the Province, with Col. Blair, M. P. P., President of the Exhibition Board; Col. Lawrie, President of the Board of Agriculture, and other notables. After some remarks from Col. Lawrie, the address was delivered by Gov. Archibald. Of the Exhibition he said: "In the Exhibition opened to-day Nova Scotia has a right to feel some pride. The entries made exhibit a variety and abundance which would do no discredit to countries more exclusively agricultural. The stock, which forms a notable feature in this Exhibition, affords a cheering proof of the progress of this department of agricultural produce. Compare our position now with what it was a quarter of a century ago."

The Journal of Agriculture, N. S., referring to the Exhibitions, says: "Our Agricultural Exhibitions are getting worked into their legitimate uses. One of these, not the least in importance, is the sale and exchange of thoroughbred animals. At the recent Provincial and County Shows there were a good many commercial transactions, in addition to the Board's two auction sales, viz., the sale of imported Jerseys and sheep at Truro, and of Shorthorns, Ayrshires and of Shropshire Downs at Kentville."

Prince Edward Island Provincial Exhibition.

The Provincial Exhibition was very successful; one of which the Islanders feel quite proud. They were favored with fine weather, the attendance was large, and the Exhibition in every respect creditable. It was estimated that there were from five to six thousand persons present the first day. The exhibition of fruit, vegetables and manufactured articles was remarkably fine. Mangel wurzel, squash, beets and cabbage are said to have been of extraordinary size. The fruit, especially, was a surprise to the visitors. Apples, pears, plums and grapes were creditable to the exhibitors and to the Province. The exhibition of cattle and horses were, it is said, superior to any ever before held in the Island. The exhibition of sheep and pigs fell short of what was expected. The display of agricultural implements and carriages was large and good. Of grain and of potatoes and other field roots there was an excellent display, as might have been expected. Textile manufactures in wool and in flax were well represented. The ploughing match and trial of potato diggers and other implements finished the exhibition on the second day.

In the Advertising Department will be seen the prospectus of a new Atlas of Ontario. From the prospectus forwarded to us it appears as if it will be a useful publication.

The Paris Exhibition.—Some of its Results.

In reply to an address from the members of the Colonial Commission to the Exhibition, presented by them to H. R. H. the Prince of Wales, he expressed his warm acknowledgment to the various Colonies for the cordiality with which they acted on his invitation to participate in the Exhibition. He referred to the rapid progress which the different Colonies have made and the greatness of the future which awaits them as evinced by the remarkable display of Colonial produce and manufactures which were made. With the suggestions of the Commissioners of the advantages that would arise from the establishment in London of a museum displaying in an adequate manner the various rich products of the Colonies, he expressed his entire agreement. He would, with pleasure, apply to the Commissioners of the Exhibition of 1851 to place at the disposal of the present Commissioners a space requisite for the preservation during the ensuing year of such goods as they may desire to retain as a nucleus for a permanent collection.

DANK PROGRESS says there is some alteration needed in the general management of our Provincial agricultural affairs. The cost of assembling nearly 200 people from all parts of Ontario to decide where the Provincial Exhibition is to be held each year is looked upon as an item of expense for little or no profit.

An Australian International Exhibition will be held in Melbourne in 1880. Perhaps some of our manufacturers will be there. Canada no doubt will be represented.

The merchants of Wingham have decided not to take butter in payment of book accounts after the 15th inst.

Now is the proper time to make arrangements for winter meetings and establish farmers' clubs.

Stock Notes.**Imported Stock for Nova Scotia.**

The *North British Agriculturist* says:—Mr. Simon Beattie last week dispatched a choice collection of cattle and sheep per S.S. Canadian for Halifax, Nova Scotia. The animals were selected personally and with special care by Mr. Beattie. The shipment included 67 sheep for the Government of New Brunswick. These comprised a number of very fine English and Border Leicesters from the flocks of Mr. Bell Irving, Mr. Wilkins, Tinswald Downs, and others, as well as 30 Border Leicesters procured from Mr. Twentiman, Bleneshassets. The remainder of the shipment was confined to Nova Scotia. It consists of 5 Ayrshires and 5 Shorthorn cattle (bulls and cows), and 8 Shropshire-down sheep.

Sale in New Brunswick of Imported Sheep.

The Government and farmers of New Brunswick are fully awake to the importance to all classes of improved farm stock. At the Exhibition grounds in Fredericton there has been a sale of one hundred sheep imported by the Government. The aggregate amount of sales was very good, the prices varying from \$11 to \$80. The increasing demand for mutton for exportation has no doubt made itself felt in the Maritime Provinces.

For the week ending October 23rd the number of cattle landed at Liverpool from the United States and Canada was much below recent periods, while the number of sheep was largely in excess of any former week, and fully compensated for the decrease in the supply of cattle. Live pigs also arrived in increased quantity. The totals were—892 cattle, 3,226 sheep, and 859 pigs. Of fresh meat the quantities were—2,472 quarters of beef and 130 carcasses of mutton. There were also landed 1,000 tubs of fresh butter.

The Bow Park Live-Stock Sale.

The sale of thoroughbred stock at Bow Park on Thursday, 31st Oct., went off very satisfactorily. There was a large crowd of farmers present from all sections of Ontario, and a goodly number from the States. With trifling exceptions, the ninety lots offered were all sold, and the prices, considering the times, were very good.

Commercial.

FARMER'S ADVOCATE OFFICE,
London, Nov. 1, 1878.

The produce trade generally has been very quiet the past month. With the exception of a pretty free movement in wheat there is little to note. The recent failure of the Bank of Scotland, followed by a great many other failures in Great Britain, has had a very depressing effect on our trade here, but still more so in England. Glasgow had a failure every day for some weeks after the collapse of the Bank. English letters, which we have seen, say they prefer doing nothing to selling produce and not getting paid for the same. What with strikes and failures, the outlook is anything but a pleasant one.

WHEAT.

Prices have been going down, down, down, for the past two months, till we think they have about touched bottom. Still we cannot see any great chance of much improvement for some time to come from the fact that the winter rates of freight and insurance are now coming into effect, which will have the effect of checking any advance on this side, even should prices advance in Liverpool. Still there is a better feeling, and a good volume of business has been done the past two weeks at a slight advance in prices. Holders along the lines of railway are now pretty well sold out.

The French have been free buyers this season so far, and were it not for them we don't know what America would have done with her wheat. The wheat crop of France is very inferior, and much of it unsaleable. There has so far been little or no accumulation of wheat stocks from the large imports into France with the exception of Marseilles. The imports at the more northerly French ports go immediately into consumption. A late New York circular, speaking of the French imports, says:—

"The net imports of wheat into France in 1877-8, Sept. 1st to August 31, were 22,580,903 bushels, which were required to supplement the poor crop of 1877; and the crop of 1878, also poor, is 57,920,000 bushels less than the crop of 1877. It would seem from this that if the estimates of the crops of the two years are approximately correct, the requirements of foreign wheat in 1878-9, Sept. 1 to Aug. 31, would be the difference between the two crops plus the amount required to supplement the crop of 1877.

PEAS.

The deliveries are still light, and many of them of very inferior quality, so much so that they are unfit for the export trade. We would advise farmers to keep such at home, and turn them into beef or mutton, which we think will pay quite as well. The corn crop of the West is so abundant and so fine that we cannot see any chance for any improvement in the price of peas. In fact, many of the peas now held by buyers have been bought too dear, and they cannot sell to-day at cost. They have been guided by the prices paid for splitting purposes, which is no criterion, as the demand for such is liable to drop off any day.

BARLEY

is dull and lower again. From what we can learn, maltsters have been trying to clear out their stocks of old malt, which were heavy, and those who have bought have been aiming to secure the finest samples. When these are exhausted they will then have to take what they can get, and there will then be hopes for the medium samples of Canadian barley.

OATS

are being laid down in Ontario from the West at 25

to 27c., cost and freight. The crop of Western is very heavy and good. We know of one firm in Ontario that used 500,000 bushels of Western oats last season in the manufacture of oatmeal.

BUTTER

continues in about the same state of inactivity. Only finest parcels are wanted and buyers are very nice and hard to please in their selections. Choice small packages and rolls will be wanted at fair prices the coming winter for home consumption.

CHEESE.

The trade in this article is at a complete standstill, and we do not know what the trade is coming to. A large quantity of August cheese, and August, September and October, is still in the factories. The parties who have contracted for the same have been either unwilling or unable to move them. There is at least one-half the August still in the country, with nearly all the September on hand. We hope factorymen will learn a lesson this season, and sell their cheese at the market value and not pay any attention to the reports and blocking prices that some of our unscrupulous dealers have paid for a few factories. A Liverpool house, writing under date of 10th of October, says:—"We are in an awful mess here with summer-made cheese, plenty in good condition selling by auction and otherwise at 23s. to 33s. per cwt., and latter end of August has been sold at 40s. 6d. this week." These facts, with the heavy make of fall cheese and the accumulation of stocks on this side, must indicate low prices during the whole of this winter. We are of the opinion that a lot of our cheese will have to be carried into the winter or shipped on consignment.

London Markets.

Nov. 1. Wheat, Deihl, per 100 lbs, \$1 30 to \$1 36; Treadwell, \$1 30 to \$1 45; Clawson, \$1 30 to \$1 45; red, \$1 25 to \$1 28; Spring, \$1 to \$1 20; barley, 90c to \$1 50; peas, 80c to 90c; oats, 80c to 85c; rye, 83c to 90c; corn, 55c to 56c; flour, \$2 25 to \$3; cornmeal \$1 50 to \$1 75; oatmeal, \$2 50 to \$3; roll butter, 15c to 18c; crock butter, 13c to 14c; cordwood, \$3 50 to \$4; potatoes, per bag, 90c to \$1; beef, per 100 lbs, \$4 to \$7; mutton, per lb, 5c to 7c; wool, 22c to 23c; cheese, 11 to 12c; eggs, 12c to 14c; chickens, per pair, 25c to 35c; ducks, 40c to 50; geese, 40c to 50c each; turkeys, 75c to \$1; dressed hogs, \$3 75 to \$4 50.

English Markets.

London, Oct. 30. Wheat, at opening, firm; corn firm; mixed American corn, per 480 lbs, 23s 6d; spring wheat, of fair average quality, per 480 lbs, 35s 6d to 37s; imports into the United Kingdom during the last week:—Wheat, 250,000 to 255,000 qrs; corn, 105,000 to 170,000 qrs; flour, 80,000 to 85,000 bis.

Toronto Markets.

Fall wheat, per bush, 78c to 92c; do, 65c to 85c; barley, 60c to \$1; oats, 30c to 32c; peas, 60c to 63c; rye, 53c to 54c; dressed hogs, per 100 lbs, \$5 to \$5 50; beef, hind quarters, per 100 lbs, \$5 50 to \$6; butter, lb rolls, 17c to 20c; tub dairy, 13c to 15c, potatoes, per bag, 80c to 90c; wool, per lb, 33c; hay, per ton, \$8 to \$13.

Montreal Markets.

Grain and provisions nominally unchanged; flour, from firm \$3 10, to strong, bakers' \$4 35.

Chicago, Nov. 1.—Wheat, per bush, 82c to 83c; corn, 33, to 35c; hogs, per 100 lbs, \$3 05 to \$3 30.

Live Stock Markets.

Toronto, Oct. 31. Cattle have been taken at the market at \$4 50 to \$5 for first-class, \$3 50 to \$4 for second, and \$2 to \$3 for third. Sheep have maintained their value of last week, although the numbers offering have been large—For first-class, \$6 to \$7; for second-class, \$4 to \$5; for third, \$2 50 to \$3. Lambs have brought \$3 75 for first-class; \$3 for second-class, and \$2 to \$2 50 for third. Calves—The same prices as last week would be paid still:—\$12 to \$14 for first-class; \$6 to \$8 for second, and \$3 to \$4 for third. Hogs—Dressed are selling at \$5 to \$6; and \$3 25 to \$3 75 live weight.

Chicago, Oct. 30.

Hogs—Market quiet; 10c to 15c lower; sales at \$3 to \$3 15 for light grades; \$3 to \$3 15 for heavy mixed packing lots.

Cheese Market.

Jagersoll, Oct. 29. Very few factories registered their offering, on account of the dullness of the market. One factory sold of August, September and October make about 1,000 boxes at 84c. Cable, 48c-

International Dairy Fair.

To be held at the American Institute, Third Avenue, 63rd and 64th Streets, New York City, commencing December 2nd, 1878, and continuing through the week, under the auspices of the different State and County Dairy Associations, the American Dairymen's Association, and the Northwestern Dairymen's Association, and the National Butter, Cheese, and Egg Association, for the exhibition of Butter, Cheese, and other Dairy Products, Implements and Machinery for Butter and Cheese Making, Agricultural Designs and Models for Creameries, Cheese Factories, Dairy Buildings and Barns. Also, Dairy Milk Cows, and all other articles or commodities in any manner connected with the Dairy."

The circular gives the list of premiums to be awarded; they are liberal. There are a great number of \$50 prizes to be awarded; the sweepstakes prize is \$100.

There are seven special awards to Canadian products. We do not know why the Canadian Dairymen's Association should be omitted from among the names conspicuously announced on the top of the circular. There is no announcement of any reduction in railway fares. The expense of time and money to attend this exhibit will prevent many Western men attending in such numbers as they would do if held at a greater distance from the sea board.

We wish this and every exhibition of the kind a success. Should any of our readers wish to know more particulars about it, they might address the Secretary, T. M. Seaver, American Exchange, 309 Greenwich Street, New York.

A Compliment from Abroad.

SIR,—I enclose you one dollar for a new subscriber. Your paper is fast gaining favor here. I will get as many new names as possible for you.

R. Cox, St. Helens, Oregon, U. S. A.

Oct. 16th, 1878.

[Perhaps some of our readers in our own Dominion who have not yet sent in one new subscriber, might take a pattern, and oblige.]

THE AYR AGRICULTURAL WORKS. — Mr. John Watson, of Ayr, Ont., has received a telegram from Paris that he has been awarded the only Gold Medal for Agricultural implements from Canada at the Paris Exposition. His industry and perseverance have been nobly rewarded. At the leading exhibitions he exhibited a larger number of agricultural implements than any other manufacturer. He has long been noted for the excellence of his productions. He has gained laurels in every country where he exhibited. He has nine different feed-cutters, six varieties of root-cutters, three varieties of grain-choppers, four different styles of horse-powers, and is the only manufacturer that makes the chilled-iron plow in Canada. We hear the Royce reapers, made by him, have given good satisfaction. He sold five hundred and thirty last year, and had orders for one hundred and ninety-four that he could not supply. He is preparing to make a larger quantity for next season's business. Send for his circular.

\$1 FOR 25 CTS. Several new and wonderful articles to be found in our Fall Catalogue. No. 1. Musical Pipe. — Made of metal, and will play any tune. No. 2. Musical Cat. — A new and wonderful article. No. 3. Musical Whistle. — Loud and clear. No. 4. Musical Harmonica. — Just the thing for you. No. 5. Musical Spider. — Finest of its kind. No. 6. Musical Wonder. — A new and wonderful article. No. 7. Golden Water-Pen. — Proves clear, golden letters, by simply dipping in water. Eureka Trick and Novelty Co., P. O. Box 454, 29 Ann St., N. Y.

N. B.—The postage on the Cabinet to Canada is 10 cents, which must be enclosed with the order— 5 cts in all. Canadian fractional currency, silver, or clean postage stamps taken.

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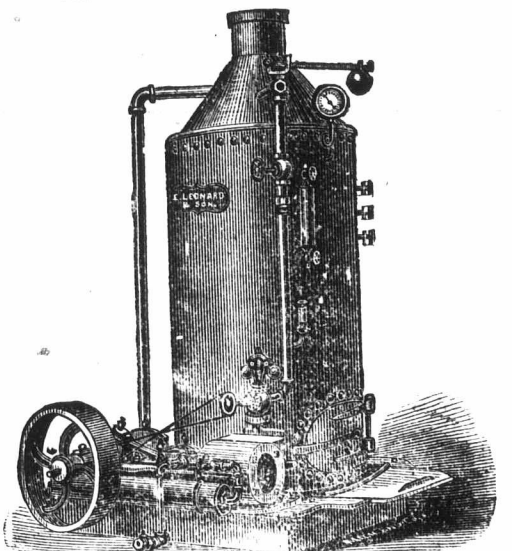
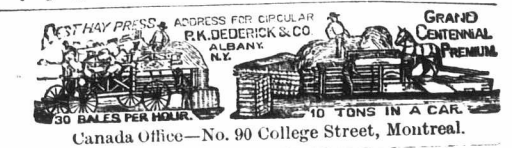
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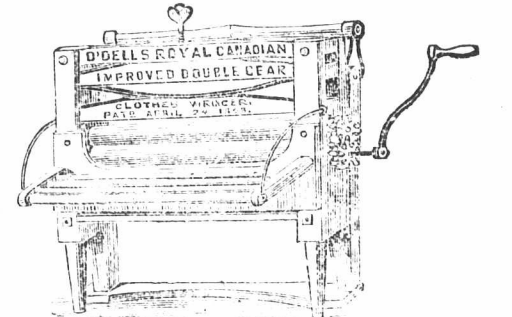
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