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RURAL NOTES.

The primal rule of good farming is to recoup the soil in some form or other, for every crop taken out of it. Land will never grow poor if this rule be rigidly observed.

A CORRESPONDENT of the *Country Gentleman*, says:—"Get something ready for exhibition at the next fair. Every body should contribute something. Do not be afraid; show your hand."

THE Exhibition of the Royal Agricultural Society of England, held at Derby rather more than a month ago, was unusually successful. The number of visitors amounted to about 130,000. A surplus of some \$20,000 goes to the general exchequer.

READ all the selected articles in a well-edited paper. *Pen and Plough* says with much truth: "In our opinion it takes longer and more labour to select, the wide world over, the best matter than to write more of what seems to be original and sometimes brilliant."

A WELL-DESERVED honour has been bestowed on two of the foremost agriculturists of Great Britain. The Emperor of Germany, by imperial decree, dated June 1st, 1881, has awarded the gold medal of merit for agriculture to Mr. Lawes and Dr. Gilbert, jointly, in recognition of their great services in the development of scientific and practical farming.

THE ninth annual report of the Wisconsin Dairymen's Association, compiled by Secretary D. W. Curtis of Madison, contains as a frontispiece, the engraved portrait of Miss Fanny Morley, twenty-two years of age, a young lady whoon leaving school with her education "finished," as the saying is, took charge of her father's dairy of seventy cows, and made the butter which won the Sweepstakes Prize at the 1879 International Dairy Show in New York, "in competition with the world."

OF all styles of "fancy farming," many unenlightened wisecracks regard "fish-farming" as most supremely ridiculous. But in a letter to the *New York Tribune*, Seth Green, the noted pisciculturist declares that the water acre in that State is equal in value, as a food-producing element, to the land, when properly stocked with the inhabitants of the water. "I have become thoroughly convinced," says Mr. Green, "through years of investigation, that an acre of water can be made to produce as much food as an acre of land."

New York Tribune states that Colonel Hitch, New London, Conn., hazards the letter to the *Boston Traveller*, that

more than half of the cows recorded in the "gilt-edged register" of the American Jersey Cattle Club "will not give an averaging ten quarts of milk daily, or make one pound of butter per day for three months;" and, referring to the recent sale of the bull Polonius for \$4,500, and "a more ordinary looking thirteen-year old cow at \$3,000," of "the Alpha craze strain of blood," he uses this emphatic exhortation: "Down with such wild-cat theories and give us good blood at fair prices, and less humbug."

THOSE enterprising stock-men, Messrs. John Snell's Sons, of Edmonton, Ont., report August 19th: "We received last week our new importation of Cotswolds and Berkshires, which includes the 1st and 2nd prize boars, and the 1st and 2nd prize sows at the late Royal Show held at Derby. These are from the far-famed herds of Messrs. Swanwick of Cirencester, and Stewart of Gloucester. Cotswolds were selected from the flocks of Messrs. Jacobs, Swanwick and Towles, and consist of shearling rams and ewes and ram lambs, and are a superior lot."

MR. MOSSOM BOYD, of Island Park Farm, Bobcaygeon, Ont., who is determined to test the relative merits of the Shorthorn, Hereford, and Polled cattle for beef production, has made some important additions to his herds by recent purchase and importation. He has bought from Mr. F. W. Stone of Guelph, Hereford cow Bonnie Lass 16, and heifer Peerless 3rd. He has also just received from quarantine at Quebec the imported Aberdeen or Polled Angus heifers, Pride of the Find-horn 3rd, Mayflower of Altyre 3rd, and Wanton. Success to him!

AT the annual sale of Shropshire sheep, at Bingley Hall, Birmingham, August 4th and 5th, Hon. M. H. Cochrane, of Hillhurst Farm, Compton, Quebec, purchased a ram for 22 guineas, and five ewes at 10 guineas each. Mr. S. Beattie, Canada, bought 20 rams and 40 ewes. Sales or lettings of prominent English flocks of Hampshire Downs took place the first week in August. At Hornington, 10 ram lambs were let at an average of £23 12s. 6d., the highest price paid being 60 guineas. Eight ram lambs were sold at 5 to 20 guineas each. At the sale of another flock, an average of £9 was made on rams let and sold.

MR. HARRIS LEWIS, the well-known dairy farmer of Frankfort, N. Y., a frequent and always welcome visitor at our Dairymen's Association meetings, is no great believer in corn fodder for milch cows, and naturally has no great faith in silos. Nevertheless, he does not think it surprising that the idea "should have swept the country like a tornado." "There was a time," he adds, "when men

said a dollar could be saved by stewing the cow's food; but you may go about the country now and find almost any number of steamers laid up to dry. The farmers found out it did not pay. The fact was that on it cows could not be healthy three months at a time, and I believe that this ensilage will turn out the same way."

THE *Globe* informs us that the Messrs. Groff, of Waterloo, have recently sold an enormous steer, fed and bred by them, to Mr. Hope, manager of the Bow Park Stock Farm, Brantford, for the large sum of \$300, or 15c. live weight. This steer, "Canadian Champion," is pronounced the best two-year old steer that was ever bred or fed in Canada. He is now twenty-seven months old, and weighs 2,000 lbs. He will be exhibited at the Industrial Fair, Toronto; Provincial Exhibition, London; and the Central Fair, Hamilton, by the Messrs. Groff, when he will be transferred to Mr. Hope, who will exhibit him at the Chicago Fat Stock Show. This animal will take a front place among American Stock as well as Canadian.

FORESTRY pays. Here is the proof of it: The average growth of different species of trees in twelve years is stated as follows: White maple, one foot in diameter and thirty feet high; ash leaf maple or box elder, one foot in diameter and twenty feet high; white willow, eighteen inches in diameter and fifty feet high; yellow willow, eighteen inches in diameter and thirty-five feet high; Lombardy poplar, ten inches in diameter and forty feet high; white ash, ten inches in diameter and twenty-five feet high; black walnut and butternut, ten inches in diameter and twenty feet high. Calculate the value of an acre of these tree-growths, especially black walnut and butternut, and it will be difficult to show to what more profitable use it can possibly be put.

Scribner's Monthly for August contains a collection of aphorisms from the negro quarters, which may be pondered to advantage by white men. Here are some of them. De wire grass lubs a lazy nigger. Dar's right smart 'ligion in a plough handle. Twelve erelock nebber is in a hurry. Nebber 'pend too much on de blackberry blossoms. Don't bet on a 'tater-hill befo' de grabblin' time. Heap o' good cotton-stalks gits chopped up fum 'sociatin' wid de weeds. Many a nice corn-silk winds up wid a nebbin in de fall. A chicken-roos' is de dubbul's steel trap, an' a grassy corn-row is his flowery garden. De mornin'-glories ain't pertickler lubly to a man wid de backache. De dinner bell's always in chune. You can't spile a ripe punkin by 'busin' it. De bullfrog knows mo' 'bout de rain dan de olmanick. Some corn-stalks is like lots o' folks—dey fling all deir power into de blades an' tassels.

FARM AND FIELD.**CLOVER.**

A field of clover should be in the rotation of crops on every farm. Why? 1. It makes the best of hay, cut early and well cured. 2. The roots and dead leaves ploughed under are equal to a good coating of manure. 3. It is one of the best of cleaning crops. Even the Canada thistle cannot stand before it. Cut at the proper time, thistles and all other weeds are prevented from going to seed. The second growth of clover will smother the thistle and other weed roots. This plan cleans better than fallowing, and keeps a crop in the ground all the time. No field goes to waste. Suppose you have six arable fields of ten, twelve, or fifteen acres. Establish a six years' rotation. Manure a field each year. Clover a field each year. The farm will improve. There will be an end to "running down." Red clover is a long, tap-rooted plant. It will find the elements of fertility that may be in the soil, bring them to the surface, and store them there for future grain crops. Clover does most good sown alone. Prepare the land in the fall. Sow twelve pounds to the acre at the earliest moment in spring. A fair cutting may be had the first season. The second will give a better, and when the hay is off a second crop may be taken off for seed. Then plough under the old roots and dead leaves. The result will be a good seed bed for any grain you wish to sow.

VALUE OF DRAINAGE.

As a matter of fact there is very little land in our country that would not be improved by drainage. Many light soils are springy, and the crops are injured in them by stagnant water. Heavy land can never do its best until drained. Vast areas of low-lying but rich land are practically valueless for want of drains to carry off the redundant moisture which forbids the growth of any but aquatic plants. Many who admit the importance of this improvement are puzzled about the ways and means of effecting it. The *Drainage Journal* mentions the following plan, which is well worthy of serious consideration: "Some enterprising tile manufacturers select careful farmers who own flat lands and make them something like the following propositions: That the farmer make a careful estimate of his average crops, and the tile manufacturer proposes to furnish the tile necessary to drain thoroughly the lands designated in the agreement, the farmer to furnish the labour of putting in the drains at a stipulated price, to be paid out of the excess of crops grown on the land over and above the average yield before agreed upon, and the tile manufacturer agreeing to take the balance of the increase in four or five crops (as agreed), to cover the cost of the tile. On level lands, where the average crop in five years runs low and the land by nature is rich, it is a safe proposition for the tile manufacturer if the farmer honestly performs his part of the contract. On rich level lands, that need drainage and need it badly, it will pay twenty-five per cent. annually on the investment, and in some instances more."

ON THE FARM NOW-A-DAYS.

As the last month of summer is passing and September approaches, the labours of the farm necessarily change and become more diversified. The principal hay and grain harvests having been secured other crops demand attention, while ploughing for fall seeding must not be neglected by those who would make seasonable preparations for that important operation. Early ploughing and thorough preparation of the soil for wheat usually pays good dividends.

After a careful cultivation and pulverization of ground designed for sowing to wheat or other winter grain, the farmer should take special pains to secure pure seed of the best varieties. A change of seed, especially of wheat, often proves highly beneficial, and some farmers aver that seed grain procured from a distance is altogether preferable to that grown in the neighbourhood. Many of our most successful grain growers practise changing seed every few years, and claim that it proves greatly to their advantage.

The use of plaster (gypsum) on pastures and meadows, particularly on light or sandy lands, and notably in dry seasons, adds materially to the yield of grass. Plaster, though the great panacea for clover, etc., is a valuable fertilizer for corn and other spring crops, the benefits derived from its liberal use, at the right time, being best understood and appreciated by those accustomed to its annual application to their crops, pastures and meadows. The grass crop of this country is of great value and importance, and is from year to year largely increasing the wealth of the rural population. It may truly be affirmed (somewhat in the style of the old saying, though not in its exact language) that no grass, no stock; no stock, no manure; no manure, no crops; no crops, no agricultural prosperity or increase of wealth. Hence, attention to pastures and meadows, the augmenting of the grass production, is of vital consequence over large areas of the Dominion.

Now is the time to follow up the pursuit (which of course was commenced months ago) of insect enemies and to destroy them effectually, or so far as possible. Potato beetles and squash and other bugs, as well as all insects which prey upon fruits and flowers, should be pursued with vigour and be accorded heroic treatment. This also is the season for cutting, digging up, or otherwise destroying Canadian thistles, bushes, briars and evil weeds generally. No plant that is a nuisance should be permitted to go to seed on the farm or along the highway. Just now, while the pests are maturing is the time to act, and all interested should do so energetically, remembering that vigilance is necessary to conquer or even check the cumberers of ground which ought to yield abundantly of valuable products.

HOME-MADE SUPERPHOSPHATE.

A good corn fertilizer may be made by taking five hundred pounds of finely ground bone, and mixing it with two hundred pounds of sulphuric acid (oil of vitriol) and six hundred pounds of plaster of paris (gypsum). A convenient way of mixing is thus described: Procure a good sized hoghead, and saw it in two. Then divide the ground bone into two equal parts, and place half in each of the half-hogheads. Divide the acid the same way, and pour upon the bone. The ground bone is to be thoroughly mixed with the acid by means of a hoe, and allowed to stand three or four days, or until it becomes a complete paste. Then the plaster is to be added, and this is usually done by shovelling out a bushel or so upon the barn floor, sprinkling on the plaster and working it over with a hoe until it is well mixed, and shovel it into a barrel, and take out another batch which is to be treated in the same way until the whole is mixed. Cover up the filled barrels and allow them to stand and ferment for a week. To prepare it for use, pour a barrel of the fermenting mixture upon the barn floor, and work into it one or two bushels of dry loam or muck. Let it remain a few days, and it becomes pulverized and all ready for use.

A gentleman says he has used this formula, or one much like it, for many years, and has tried it side by side with purchased superphosphates, and with more satisfactory results. Its cost, aside

from the labour of manufacture, is about seventeen dollars per ton, or considerably less than half that of the commercial superphosphate; labour included, it would not cost more than half. There is no doubt that fertilizers of this kind are of great benefit to vegetation in giving it an early and vigorous start, even if one has an abundance of stable manure. Our seasons are short, at the best, and a week's start, for corn, by means of superphosphates, may save the entire crop from an early frost.—*Farmers' Cabinet.*

FEEDING EXPERIMENTS.

A report by Professor Brown concerning certain experiments in feeding stock at the Ontario Experimental Farm, for the market during the winter of 1880-81, has been issued in advance of the usual annual report of College work, in order that farmers may avail themselves of the result arrived at in their arrangements for the coming fall and winter. These results are not to be considered final, for, as the report states, in large print, that it may be carefully noted: "All experiments must be repeated again and again ere confidence can be established."

SHEEP EXPERIMENTS.

First crosses from pure-bred Leicester, Cotswold, Oxford Down and Southdown rams, or ordinary Canadian ewes, have been bred and fattened at the Model Farm during five years. The results, as given in this report, will be an astonishment to our farmers who have been inclined to favour the long-wooled and big-bodied breeds. To quote Professor Brown's summing up of this matter: "Combining wool and flesh value, the Southdown grade gives the highest returns, as much as double that of the Cotswold grade, and thirty-five per cent. over that of the Leicester grade, as also slightly in advance of the Oxford Down grade."

CORN, OATS AND PEAS.

A series of experiments on the feeding value of these grains is confirmatory of their chemical analysis, and shows no less than twenty-one per cent. in favour of peas. This is equivalent to \$4.50 per head of increased profit during one winter's feeding, or \$4,500 in a stable of 1,000 head. It is calculated that 100,000 head of three-year old cattle were supplied to the British market by Ontario last winter. A single winter's feeding of this aggregate on peas would mean a profit of \$450,000 to the whole Province. In this view of the matter Professor Brown is comforted as to the protective duty on corn, seeing that it is not, as many erroneously suppose, the cheapest producer of beef. But what about the pea-weevil? It is said that it could easily be put down if buggy peas were not allowed to be sold. We should need an Inspector with a microscope in every market effectually to prevent this. It is the opinion of many good judges that the only way to get rid of this insect is to starve it out. If no peas were grown throughout the Province for a single season, it is thought the nuisance might be abated. Pity we could not do this, and take a fresh start in growing a grain at once so profitable and so well suited to our climate.

LETTER FROM DOCTOR LAWE, OF ROTHAMSTEAD, ENGLAND.

There is embodied in the report a letter from this distinguished British agriculturist, commenting on a prior report of Professor Brown's, which was confirmatory of opinions given to the public by Dr. Lawes. It is highly complimentary to the care and accuracy with which the experiments have been made at the Ontario Agricultural College, and Professor Brown is to be congratulated on having received commendation of his work from one so well fitted to judge of it. The upshot of this communication goes to show: 1. That the increase upon a fattening animal is of less value than the

cost of the food consumed to produce it. 2. That the main profit of feeding is in the manure thereby obtained. 3. That Canada has great advantage over Britain in meat production from the cheapness at which store cattle can be raised and sold. Any thoughtful Ontario farmer who ponders well this part of the report will come to the conclusion that those who sell their store cattle had much better keep them and fatten them on their own farms. The constant sale of grain and store cattle form the upper and nether millstone which is grinding the life out of many a struggling farmer in "this Canada of ours."

PREPARED AND UNPREPARED FOOD.

It has long been a much-debated question among feeders of live stock whether whole hay and roots, or the same article of food cut and pulped, form the more profitable diet. The experiments here detailed favour the system of cutting and pulping very decidedly. Cattle fed on unprepared food gained on an average 1.76 lbs. per head per day, while those that got prepared food gained 2.10 lbs. per head per day, being equal to one-third of a pound per head per day in favour of the prepared food. At the figures given in the report this would make a difference of about \$4 per head in favour of cutting and pulping, not a large sum in the care of a single beast, but amounting to a very considerable amount when multiplied by the total of all the cattle fed throughout the Province of Ontario. Professor Brown estimates it to be at least \$420,000. From this, however, would have to be deducted the cost of cutting and pulping, which would include outlay for the necessary machinery and attendance. Of these items, no estimate is given; but it is intimated that it is partly balanced by the fact that rougher, unpalatable, and even unsound kinds of food can be utilized by cutting and pulping, which would go to waste on the other plan.

TWO-YEAR OLDS VERSUS THREE-YEAR OLDS.

Another question at issue among stock-men is, whether it pays better to finish the fattening process at two years old or at three. This report details a series of experiments, which make the profit from a two-year old \$15.68, while from a three-year old it is only \$4.04. A Toronto paper, in commenting on this part of the report, suggests that the experiment shows less favourably than it ought in regard to the three-year-olds, in consequence of the actual cost of a fat two-year-old being taken as the basis for the third year's work. The cost of the two-year-old is given in the report at \$79.29. The paper referred to thinks it should not exceed \$40. This appears to be an undervaluation, but at any rate there seems to be a discrepancy here which needs further explanation. Professor Brown invites inquiry and criticism, and will, doubtless, give his best attention to this point.

DOES IT PAY TO FATTEN OR FEED CATTLE FOR MANURE PRODUCTION ONLY?

Professor Brown answers this question with a decided "yes." He makes the actual cost of the food given to a three-year old steer \$31.26, and he estimates the manure made from it at \$32.06. His manure valuation will be accepted by all practical farmers. It is as follows: A three-year old steer will produce seven tons of first-class, home-made manure, or mineral superphosphate. The Professor asks: "Would any experienced farmer give seven tons of such manure for one of bone dust or superphosphate?" He would not. In actual experience four tons of first class barn-yard manure is fully equal to one ton of the special fertilizers named.

THE VALUE OF A MANURE HEAP.

Perhaps the most important part of this report is the showing which it makes of the fact, for such it is, that it is actual cash which a farmer handles in turning over a manure-heap. It will indeed be,

as the Professor remarks, "a golden day for this or any country" when the farmer practically regards and treats a pile of manure as a pile of money. During the past winter the manure made at the Model Farm stables was accurately measured and weighed. Omitting details, it may be stated that the manure-heap comprised thirty seven tons. What would the ordinary farmer consider this worth? Let his practice answer. Our best farmers are willing to pay \$1 per ton for manure got at city stables. On an average of distances, they can haul two loads per day with a single team. Each load is, therefore, worth \$2.50 at what may be called farmers' valuation. This would make the pile worth \$1,342. But at commercial valuation, it is worth \$1.60 per ton more. This commercial valuation has been made by careful experimenting under a variety of conditions, and the Professor estimates the manure to have been worth about the same as the cost price of the food before it was eaten by the stock.

CONCLUDING OBSERVATIONS.

1. This report will repay study. The object of the present article is to awaken curiosity and interest in regard to it. There are topics of discussion raised in it sufficient to occupy Farmers' Clubs and Granges a good part of the coming winter. Do not be satisfied with this brief summary, but get the report and con it over thoroughly. It is tough reading, some of it, but will well repay close attention.

2. This report alone is conclusive evidence of the utility of such an institution as the Ontario Agricultural College. Only at such a place could these experiments be pursued. Look at their money value to the country. Suppose the Professor's conclusions as to prepared food for stock to be correct. Suppose, further, that they are generally acted upon. Result, upwards of \$400,000 profit vested by Ontario in a single year. Suppose again, the Professor's calculations as to the comparative profit of ripening up cattle at two years old to be correct, and to be reduced to practice. Result, the handsome profit of \$1,168,400 profit to the farmers of Ontario in a single year. Compared with these possible, and even probable gains, through the work being done at this institution, what a bagatelle is its annual cost of \$25,000 or \$30,000 a year. But this is only one department of its usefulness. Besides this, there are one hundred or more young men being trained to scientific farming to go forth as missionaries of improved agriculture throughout the length and breadth of the Province. The founder of this institution will surely get a gold medal some day—or, possibly, a national monument when he is dead.—*Western Advertiser.*

The preparation of the soil for rye is the same as for wheat, though it will do well in a poorer soil than wheat. A soil that is rich enough for a good crop of rye, can be made, in many cases, to produce a more paying crop by adding a dressing of 300 pounds of any good fertilizer, and sowing it to wheat. The value of rye straw in some localities may make the rye crop, grain and straw together, more profitable than even a good crop of wheat. This only is the case near cities, where straw brings a high price.

A CHARGE of skimming and milk watering having been preferred against Mr. Benson Baldwin, one of the patrons of a cheese factory in London township, a meeting of the Board of Directors was called for the purpose of holding an investigation. Mr. Baldwin was present and acknowledged the truth of the charge, when the Board decided that he should forfeit his entire month's milk (4,024 lbs.), said milk to go to the benefit of the other patrons. Mr. Baldwin signed an agreement to this effect, when the matter was settled.

CURRENT NEWS ITEMS.

We are informed, remarks the *Huron Signal*, that a two-year old calf comes to the pump at regular intervals during the day on one of our farms since the dry spell, and seizing the handle of the pump tries to help itself to a drink. It insists upon remaining until water is given it.

THE thoroughbred Jersey City cow, called Pride of St. Croix, owned by Henry Vaughan, of St. John, N.B., and valued at \$1,000, died from the effects of eating a quantity of hard bread. The cow took first prize at the late exhibition, and has always been similarly successful wherever exhibited.

NEXT session of the Ontario Agricultural College commences on the 1st of October. The Matriculation Examinations begin on that date. Lecturing is to start on the 4th of the month. Candidates for admission should not delay sending in their applications. The institution bids fair to be filled to its utmost capacity, and before long, it will be found that a single college of this kind is not sufficient for the wants of the rising generation.

BEAR stories, says the *Durham Review*, seem to be quite plentiful around here just now, and if we believe all we hear, there will be fine sport hunting them this fall, and bears'-grease will be plentiful. The other day one was seen in the immediate neighbourhood of Rockville, and every male inhabitant of that thriving village at once turned out and went to the "bear hunt," but they all forgot to provide themselves with fire-arms, and if they had only come upon Bruin, they would either have had to run, or arm themselves with such weapons as nature provides. But although a thorough search was made, no bear was again seen.

WE find this happy bit in one of our exchanges: Somebody has suggested that the Canada thistle be adopted as our national emblem instead of the maple leaf. The idea is a good one, for there are more thistles in the country than maple leaves. It is disgraceful the way the law regarding the cutting of this pest is disregarded. A careless farmer is about the worst neighbour a thrifty one can have. He not only allows his own land to be overrun with thistles, but the seeds are blown into the fields of his neighbours, and the latter lose time and money in the vain attempt to keep their lands clear.

AN exchange says: It seems the farmers are growing the wrong kind of wool. The statement is made that 750,000 pounds of Canadian long stapled wool is at the present moment unsaleable. There is no demand for such class of wool. The manufacturers want a finer fibred and shorter stapled wool. The country wants other breeds than Cotswolds or Leicesters. The Southdown and Shropshire Down will give better mutton and finer and higher priced wool, or a cross of the native sheep with one or the other of these will improve the quality of both flesh and fleece, and thus put money in the farmer's pocket.

A MONTREAL produce dealer while in London lately was surprised to find Russian butter offered for sale in good sized quantities in several wholesale provision stores in that metropolis. He was at first inclined to be somewhat sceptical about this butter being the product of the Russ, but was soon convinced of the fact in more than one quarter. It was handsomely got up in white oak tubs, and very much resembled fine Canadian. "It is stated," adds the *Montreal Gazette*, "that butter and cheese factories have been started in quite a number of the Russian districts, and that the production of dairy produce upon scientific principles is likely to become a staple industry of that vast empire." This will sharpen Canadian producers to improve the quality of all their butter. There should be one grade; and all the rest should be consigned to the soap-makers.

HORSES AND CATTLE.

The Berkshires.

Unquestionably the most popular breed of hogs in this country at the present time is the Berkshire. Mr Snell of Edmonton, Ont., three of whose herd are represented in the accompanying engraving, and who has had many years experience in breeding them, gave the following testimony before the Ontario Agricultural Commission:—

"The only breed of pigs that I have been raising for the last fifteen years is the Berkshire. I had some experience in breeding Suffolks and Yorkshires previous to that time. The Berkshire would be classed with the small breeds, I suppose, but they are larger than the Black Essex, and other small breeds. I would call them a medium-sized hog. The Yorkshire is a large breed, the Suffolk and Essex small. I think a medium sized hog is the most profitable. A small breed will perhaps get fatter at an early age—say at four or five months; but one objection to them is that they get too fat—that there is more fat than lean in them—that their meat is not marbled. At a year old the Berkshire will beat the Suffolk by nearly 100 pounds, and his meat will be more marbled—there will be a larger proportion of lean than fat.

"The Berkshires mature much earlier than the large

It will grow more remunerative as it is gone into more extensively, for the richer the land becomes by manuring the more stock per acre it will carry. On several points in stock feeding the majority of our farmers are slack, and need stirring up. There are breeds that feed faster than others, make a larger bulk, and are consequently always in demand. Conspicuous among these are the Shorthorn, Hereford, Galloway, and other polled varieties. The first cross on the native cow from these pure-breeds makes a valuable stall animal. It is a dictate of common-sense, therefore, to put away all inferior bulls and use only the best males. Where is the wisdom of saving one dollar on the service of a bull and losing five dollars on the price got for his progeny? Another point of importance is to feed the calf well from the first. An early stunt is never overcome. No need of pampering, but keep up a steady growth. The meal-bag is a profitable institution for calves as well as older cattle. Early maturity should be aimed at. If with good feeding an animal can be of the same bulk at two

Cow Feed.

All keepers and feeders of cows should bear this in mind, that a cow cannot make cud when fed on shorts or meal alone. These must be mixed with longer feed, either in the manger or in the animal's stomach. It is not necessary to mix these substances before feeding, as the motion of the stomach will mix them sufficiently to form a cud.

Indigestion in Horses.

When a horse is uneasy and suffers, and turns around his nose to his flanks, he is troubled with indigestion, and this also affects the kidneys. When a horse is not working, good hay is sufficient without corn, and too much corn will then be apt to cause trouble. The remedy for such trouble is to lessen the grain if he is in good condition, give a pint of linseed oil and repeat the next day. Then give a dram each of ground ginger and carbonate of soda twice a day, in some bran and cut hay wetted, or in a bran mash.



BERKSHIRES.

breeds, and they can be fattened at almost any age. I think it is more profitable to fatten a Berkshire pig at eight months old than to keep it over the winter. At eight months old we can bring them to 200 or 225 lbs.

"I have been breeding, not to supply the general market, but to sell hogs for breeding purposes. At the prices we get here for pork I do not think there is much profit in raising pigs for pork, and we cannot at all compete with the Western States in producing pork profitably.

"In my opinion the best time to have pigs drooped is in March or April.

"Young pigs should be fed with milk, slops, and shorts. When you want to fatten them I think peas are the best feed for that purpose. In the winter season we let the breeding sows run out, and we feed them on peas. I think peas are better for breeding sows than slops. After they have pigs, we prefer to feed them slop feed, swill, and shorts. When the dam is fed on strong feed like peas, the young suckling pig is likely to have its blood heated and its legs crippled. I think it is best to have a yard or a clover or grass field for pigs to run upon in the summer time."

Stock Feeding.

There can be little doubt that henceforward meat equally with grain is to rank among the products of this country for the foreign market. It is well that this is so, for manure is the great want of our agriculture, and according to the old agricultural proverb, "no stock, no manure; no manure, no crops." Low as is the price, comparatively speaking, of fat stock in Canada, it has been abundantly demonstrated that with careful breeding and feeding it can be produced at a paying profit.

years old, as with scant feeding at three, is it not good policy to save a year's board and trouble of attendance? And yet again, a thoroughly thrifty farmer will not sell his cattle in lean, store condition, but will fat them himself. A lean steer will not bring more than three and a half or four cents per pound. Fat him and he will bring, say, six cents. Suppose the lean steer to weigh 1,000 pounds and to be worth four cents per pound. Feed him and thereby add 300 or 400 pounds to his weight. What is the result? Why the whole carcass becomes worth six cents per pound, so that there is a profit of two cents per pound made on his lean weight. Every farm should fatten a few animals each season. Sell a lean steer, and somebody else gets the profit out of him. Fat him yourself and you pocket the gain. Bring sound, common-sense principles to bear on this matter, and every farmer will be, in a small way, a stock feeder. Better prices will be got, and the farm as well as the farmer will be benefited. There will be a good pile of manure to spread on the land, and bigger grain crops will be reaped.

JOSIAH ALLEN's wife says: "We, too, are posterity, though meebly we don't realize it as we ort to."

Grain for Dairy Cows.

"Which is the best kind of grain to feed dairy cows: corn meal, cotton-seed meal, or wheat bran?" is a question asked by a correspondent. We should reply that, under ordinary circumstances—as where the other feed is simply short but of good quality, as in a dry pasture—that a mixture of the three kinds of grain, in equal parts, would be likely to give best results. The same would be true if good hay is dear and grain is grown to make the hay hold out. But if the other fodder is poor, like ripe straw or bog hay from wet meadows, we should feed pretty largely of cotton-seed meal, giving, perhaps, a little of each of the other kinds of grain.

The writer complains that the question has never yet been settled, so that farmers can all know just what to feed and just how much each kind of grain is worth for feeding. We fear that these questions will long remain unsettled—so long, probably, as cows and breeds of cows differ in their powers of digestion and in their other general characteristics. A cow inclining to fat would do better at the pail if fed bran and cotton-seed meal, in place of corn meal, while the reverse would be true of one that "run to milk" at the expense of her flesh.

The same writer also asks whether bran that is very thoroughly separated from the flour of the wheat is more or less valuable for cows than that which is less thoroughly separated in the grinding process. To this question we should answer that, if no other grain food is given, the more flour in the bran the better, if the price is the same. If corn meal or cotton-seed meal be fed with the bran, and the clear bran sells for considerably less than that containing more flour, we should buy the cheaper quality. The bone material which milch cows so much need is found chiefly in the outer covering of the wheat.

Live Stock Importations.

It will be remembered that last spring Mr. James Hunter, Pilkington, was appointed by the Ontario Government to make fresh purchases of live stock in England, for the Experimental Farm. While there he purchased six cattle for this institution, which were put into quarantine at Grosse Isle, below Quebec, on their arrival in Canada. The three months' detention expired this week, and the cattle were brought on to the Farm, where they arrived on Tuesday in good condition. The animals were selected by Mr. Hunter from some of the best herds in Britain, at an average price for each of seventy guineas. The following are the importations referred to:—"Sir Leonard," a fine seventeen-month old Durham bull of the Booth strain. The animal is of a roan colour, and is remarkably well built, its only defect being a somewhat disproportionately large head, a fault which will disappear as the beast becomes older. The next animal is an Ayrshire bull "Stonecalsey," two years old, and of a white and dark brown colour. "Sybil's Darling," a Polled Angus heifer, 17 months old, is exceedingly well proportioned and well filled out, in fact it is one of the finest, if not the finest, black heifer ever imported into the Dominion. "Beta," a Short-horn bull, is scarcely a less remarkable animal of its kind than the heifer. It is twenty-three months old, of beautifully symmetrical proportions, and fine colour and hair. It cost \$1,400. "Meldrum," is a sixteen months old Polled Angus bull, from the Marquis of Huntley's famous herd. It is a fine, long, and lofty animal of good proportions. The last of the Farm's importations is "Hopedale," a Hereford bull sixteen months old, and well filled out for its age. Among the forty cattle grazing in one of the fields on the farm are three cows of the Ayrshire breed, which arrived along with the Model Farm's animals. These were purchased by Mr. Hunter for Mr. Bessey, of the Little Falls Creamery, at an average cost of \$200 a head. Mr. Bessey intends using them to improve the stock in the neighbourhood of his creamery, a praiseworthy object which will not only be of advantage to the farmers near Limehouse but also to the creamery. These animals are well built and are of a beautiful light brown colour shaded with white.—*Guelph Mercury.*

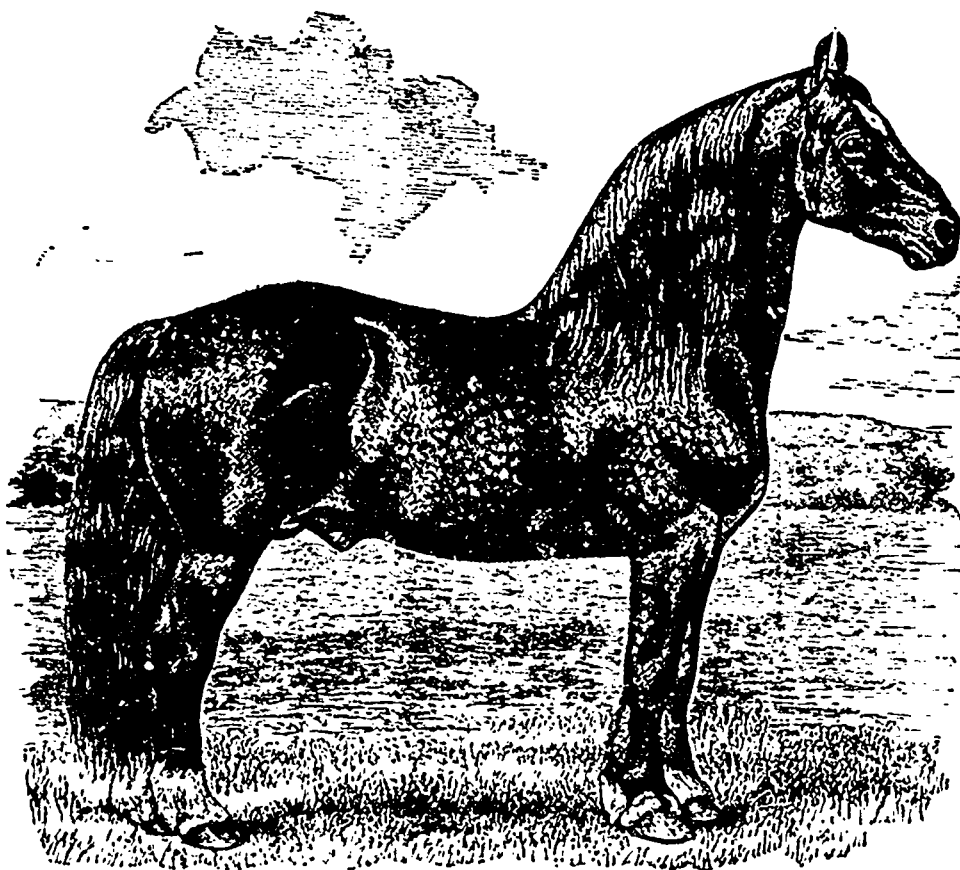
WHAT constitutes a revolution of the earth, First comes the spring, then the summer set and then the fall. Needless to go winter further details.

The Clydesdale Horse.

Herewith we present our readers with an excellent cut of a Clydesdale Stallion. For purely draught purposes this breed of horses is unsurpassed. While it is not so well suited for the general purposes of the farm, as a somewhat lighter bodied and slimmer legged animal, the Clydesdale is in great demand for hauling railway lorries, heavy-laden waggons, and ponderous machines. Being in constant request for these uses, it is profitable to breed this class of horses to supply a craving market.

Treatment for Ringbone.

Ringbone consists of inflammation of the joint of the foot and deposit of bony matter just above the coronet and above or below (or both) the pastern joint. In the end the bony matter covers the joint and renders it immovable. The treatment of a newly-formed ringbone consists in giving the animal rest; use a high or low-heeled



CLYDESDALE HORSE.

shoe, as the case may need, and as the horse walks on the toe or heel. To reduce the heat and inflammation, apply cold water with wet bandages, and when this has been effected, apply a blister made of 20 grains of corrosive sublimate and camphor, 10 drops of muriatic acid, and one ounce of oil of turpentine. When the blister is formed the part is washed and greased with lard. If this is of no avail, firing may be used with benefit, especially with a young horse. One ounce of hypo-sulphite of soda may be given daily for two weeks to remove any rheumatic tendency.

Scarlet Fever from Milk.

About forty cases of scarlet fever having simultaneously occurred near Keswick, Dr. Robertson, medical officer for the Cockermonth Rural Sanitary authority, on Monday stated the disease had been traced to a milk dairy from which all the parties got their milk. One person escaped through boiling the milk. He did not know how the contagion got into the milk, but one guardian stated that there had been a case of fever next to the dairy, and the theory of the doctors in the neighbourhood was that in disinfecting the bedding and

carpets by shaking them outside while some milk vessels were standing, some germs of fever had been shaken into the milk vessels.

SEVERAL horses have died at Ottawa recently from a very peculiar disease. The cause of the disease is unknown. The animal is first taken with violent pains in the abdomen, which completely prostrate him, and death follows after several hours of terrible agony.

Two cows in the State of Georgia were missing for ten days recently. They were at last found with horns locked, and "in a miserable plight." The horns had to be sawed before the animals could be separated. This incident furnishes a cogent argument in favour of Polled or Muley cattle. Another is, that hornless beasts cannot gore each other. A third is, that they can be kept in winter stables without fastenings, and well littered will tramp their manure solid, so that it only needs to be handled once, namely, when it is hauled to the field. No wonder Polled cattle are "coming to the front."

THERE is quite as much necessity for barn cleaning on the farm as for house cleaning, and if farmers were as punctilious about the renovation and purification of the outbuildings as farmeresses are about the dwelling, there would speedily be an improvement about the appearance of things, and of convenience too. Lost or misplaced tools are brought to light, barn, shed, and shop furnishings put in order, space gained and a revival of cheerfulness every where.

COUPLING season for sheep will soon be here, and a good ram only should be used. A "pure blood" of the breed desired should be procured within reach. For lambs designed for the early spring market, a Southdown cross is to be preferred, the Cotswolds give a larger but less prized animal. The lambs should by this time be separated from their dams and given a good pasture by themselves. The flock should be watched carefully that no disease, as dysentery, etc., make much headway among them.

Who says that Mr. Stirton's Canada Thistle Law is a dead letter? The *Globe* of August 26th states that four Westminster farmers have recently been fined for allowing this pesky weed to ripen in their fields. There would be "a noble army of martyrs" as to numbers, if all similar delinquents were brought up to the scratch. In sober seriousness this nuisance *must* be abated, if we are to have really good farming. A writer in the *N. Y. Tribune* says: "I never allow one to go to seed on my premises, and I have no trouble whatever about exterminating them by seeding down to grass, yet I am constantly annoyed with them. The second year after a piece of ground is broken up it is invariably overrun with them. This is due, I am now persuaded, to the distribution of the downy seed by the wind. Away to the south of me are large pastures in which there is thistle seed enough grown each year to plant the State, and at this time of the year the air is full of it. It is only a waste of energy to fight thistles until some law compels those who raise them to cut them before the seed is formed."

BEES AND POULTRY.

BEE-KEEPING.

This is an industry that should find a place on every farm. Bees properly rank among the live stock, and, small though they are, may be made more profitable than the poultry. They do not exactly work for nothing and board themselves, but they come very near doing so. The great hindrance to bee-keeping is ignorance, first, of its profitability; and, secondly, of the way to do it. A high authority has estimated that not less than \$10,000 is lost in every township throughout Canada for want of bees to gather the honey that goes to waste. What a vast aggregate this makes when added up! If people would only inform themselves concerning the wonders of bee-life, this branch of rural industry would not be so generally neglected. The habits of bees form quite a study, and no one should embark in bee-keeping without mastering the principles of it. It is a very interesting study. A manual of bee-keeping reads like a novel to one who is not familiar with the subject. Few people can read such a book without wanting to keep bees. Generally speaking, beginners should commence with a single hive. The bees will probably increase faster than their skill and experience in managing them, for bee-keeping is an art as well as a science. It is not claimed that there is a fortune in bees, but that it is as profitable as any other department of rural industry, and therefore worthy to be pursued. It has risks and difficulties about it. So have wheat growing, dairying, cattle-breeding. The chief difficulty about bee-keeping in this country is our severe winters. As yet no infallible method of wintering has been discovered. Occasionally a winter like the last, is very destructive to bee-life. But the same is true of other lines of business. The past winter was very hard on fruit, as well as bees. Nevertheless, fruit-growers will persevere; and so will bee-keepers. Honey is an article of commerce which is in brisk demand. As with our grain and meat, there is a good foreign market for it. There is therefore ample encouragement for extending this industry, and the prospect at present is, that it will largely increase. This journal will do its best, to keep its readers well informed on a subject which is attracting wide and well-deserved attention, and is especially worthy the notice of the farming community.

A CHAPTER ON FOWLS.

THE RURAL CANADIAN will not dabble much in fancy farming of any kind, and will maintain practical views on poultry matters. Its editor has been in his time a fowl fancier, and like Burnham, could write a book entitled "The Hen Fever, by one who has been there." Not that he proposes to do it, however. "By no means." There are far worse money-sinks and time-killers than poultry fancying. When carried to excess, it usually cures itself before very serious results ensue. But the most enthusiastic fowl-fancier is a wise man compared with the farmer who does not think poultry worthy of the least care and attention; who allows his barn-yard to be disfigured by hideous, mongrel, feathered bipeds; who leaves them to roost on vehicles, implements, or fences, and defile every clean thing with their droppings; and finally is barbarous enough to provide no shelter for them against the rigours of a Canadian winter. Whatever is worth doing at all is worth doing well. Poultry should have a place on every farm. Like everything else, they should be put under skilled management. A choice breed or breeds should be selected, and care taken to mate them properly, and preserve the best specimens for future increase. Fowls enough should be kept on a farm to pick up the

waste of barn-yard and fields. This is where the profit of poultry keeping is found—fowls are scavengers and gleaners. It is questionable if it pays to keep them when all their food must be bought, unless a considerable proportion of their cost is balanced by the interest and pleasure of looking after them. To those who delight in the care of poultry, it is a sort of recreation to keep fowls, but as the saying is, they will eat their heads off in most cases when all their food has to be bought. On the farm they are doubtless profitable, though owing to the lowness of the price usually obtained in our markets for eggs and poultry, the margin of profit is not a very wide one.

BEES ON A SMALL SCALE.

We have seen a great many small farmers and suburban city folks who do not keep bees. In fact, in many sections of Canada it is a rarity to find such persons giving any attention to bee culture. Some may plead that they cannot afford the money for the purchase of a good colony; and after having purchased them cannot afford the time to attend to them. Now, they will not draw very heavily upon your pocket-book or upon your time.

Bees, like other stock, require pasturage; but unlike horses, cattle and sheep, they are free commoners, ranging at will in search of stores, nor can they be arrested and punished for intrusion upon premises other than those of their owners. A single colony of bees in good condition in the spring may be counted upon to double or triple their number in a single season, securing ample stores for winter consumption, while supplying a gratifying surplus for household use. This accumulation will prove most acceptable in families, especially when the price of butter rules so high as to place it beyond the reach of those not blessed with fat pocket-books.

THE FRENCH WAY WITH POULTRY.

La Basse-Cour, a French journal specially devoted to the interests of the poultry yard, gives the following directions for insuring white, plump and tender poultry for the table, as obtained from a celebrated cook in the south of France. To get good weight and a delicate colour, only meal from grain of last year's growth should be used in the fattening process, and the water employed for the mixing of the food should be mixed with salt in the proportion of ten grammes to the litre (three-eighths of an ounce avoirdupois, to a quart of meal). Further, a small quantity of coarse gravel should be added to the paste thus made, so as to assist the bird's digestive functions. Special care should be taken not to give them any heavy meal for at least twelve hours before they are killed, so that the intestines may be empty at the time of death, and the acid fermentation of their contents which would otherwise ensue, and which facilitates decomposition, may be avoided. Nor should we be in too great a hurry to pluck them; if feathers are pulled out while the blood is still fluid, the vesicle at the root of each of them becomes engorged and the skin gets spotted. A fowl killed while digestion is going on will hardly keep for a week. By attention to the above directions they may be preserved for a fortnight in mild, wet weather, and for three weeks or more when it is dry and cold. A few pieces of charcoal put inside will assist in preservation.

THE EFFECTS OF FOOD ON EGGS.

It does not require much, if any, extra understanding on the part of any one to really see how the flesh of a fowl fed on wholesome food and water should be better to the taste than those fed at random, and upon all manner of unwholesome food.

This applies equally to the eggs also. Anyone can test this, if he so wishes, quite easily, by feeding on slop food, or food of an unclean kind, such as swill and decaying garbage. The flesh of such fowls will quickly taint, and eggs will taste unsavoury, at least to anyone with an ordinary palate. Fresh air has much also to do with this matter. No flesh is fit for the table which is not allowed an unlimited quantity of pure air. If any person of ordinary discernment would consider the actual condition of highly stall-fed animals of Christmas and other similar times of rejoicing, he would be quite easily satisfied that although to look at, the stall-fed animal which always lacks pure air, is the fattest, yet its flesh does not agree with the stomach as does that of the healthy, ordinarily-fed animal. Some may say that the extra fat does this. I say not, for I have quite often kept account, and though I do not touch a morsel of fat I was troubled afterwards with a disordered stomach, which never appeared when I partook heartily of ordinary fine beef, both fat and lean.

FOWLS seldom tire of milk. They may eat too much grain or meat for health, but milk in any form is more palatable and healthy.

NEVER keep an old hen. After the second year, hens, as a rule, diminish in laying power. Of course, the quantity of eggs a fowl will lay, as well as the season of laying, can be regulated to a certain extent by care and feeding; but unless a hen is of a valuable breed or especially useful as a setter or mother, it does not pay to keep her after she is three years old.

PROFESSOR ALEXANDER WILSON, of Dublin, has calculated the amount of sugar contained in the calyces of different kinds of flowers, and the proportion of honey which insects can extract from it. He calculates that 125 clover blossoms contain one gramme of sugar. As each blossom consists of about sixty calyces, at least 125,000 by 60, or 7,500,000 calyces, must be rifled to afford a kilogramme of sugar, and as honey contains 75 per cent. of sugar, it requires 5,600,000 calyces of clover to yield a kilogramme of the former. Hence we may imagine the countless numbers of flowers that bees must visit to be able to stock their hives.

CANADIAN CATTLE FAIRS.

The following list of Canadian cattle fairs, and the days on which they are held will be found useful:

- Acton—The Thursday after the first Wednesday in each month.
- Berlin—First Thursday in each month.
- Brampton—First Thursday in each month.
- Drayton—Saturday preceding the first Wednesday in each month.
- Durham—Tuesday preceding the third Wednesday in each month.
- Eden Grove, Pinkerton Station, county Bruce—The last Tuesday in each month.
- Elmira—Second Monday in each month.
- Elora—Tuesday preceding the first Wednesday in each month.
- Erin—First Monday in January, April, and October.
- Fergus—Thursday after the third Wednesday in each month.
- Galt—Wednesday after the second Tuesday in each month.
- Guolph—First Wednesday in each month.
- Hamilton—Thursday after the first Wednesday in each month.
- Hanover—Monday preceding the third Wednesday in each month.
- Harriston—Friday preceding first Wednesday in each month.
- Kerrwood Union—Third Wednesday in March, June, and September, and the second Wednesday in December.
- Listowel—First Friday in each month.
- Marshville—Second Wednesday in each month.
- Masonville—First Tuesday in February, May, August and November.
- Mono Mills—Third Wednesday in January, April, July, and October.
- Moorfield—Monday preceding the first Wednesday in each month.
- Mount Forest—Third Wednesday in each month.
- New Hamburg—First Tuesday in each month.
- Orangetown—Second Tuesday in each month.
- Waterloo—Second Tuesday in each month.
- Woodstock—Second Thursday in each month.
- Thorndale—Second Wednesday in each month.

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- Fine Wool Sheep Husbandry.** By H. S. Randall. 9c.
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- How Crops Grow.** A treatise on the Atmosphere and Soil. By Sam. E. Johnston, M.A. 1 vol., cloth. \$2.00.
- Farm Drainage.** The Principles, Process and Effects of Draining Lands. \$1.50.
- The Stable Book.** Being a Treatise on the Management of Horses. By John Stewart. \$1.50.
- The Structure and Diseases of the Horse**—with their remedies. By Youatt, Spooner and Randall. \$1.50.
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 Manufacturers and Importers of Watches and Jewelry, Designers and Makers of the well-known Indian Clock,
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PLAIN QUESTIONS.

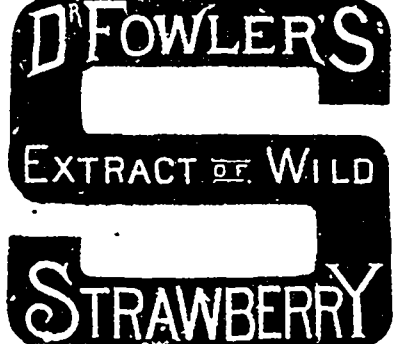
- DO YOU KNOW how to draw a Note of hand?
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FOR SALE BY ALL DRUGGISTS.
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GOOD PAY TO AGENTS.

Agents wanted in every village, town and township, to make a thorough canvass for the RURAL CANADIAN. Liberal inducements. Work to commence at once. For full particulars address

G. BLACKETT ROBINSON,

5 Jordan Street, Toronto.

Publisher

LETTERS on business should always be addressed to the PUBLISHER, while communications intended for insertion in the paper, or relating to the Editorial department, to ensure prompt attention, must be addressed to EDITOR RURAL CANADIAN.

Mr J A McLEAN, Manager Advertising Department of this paper, is authorized to make contracts at our regular rates.

The Rural Canadian.

EDITED BY W. F. CLARKE.

TORONTO, THURSDAY, SEPTEMBER 1st, 1881.

As we go to press the Toronto Industrial Exhibition is assuming fair proportions, and promises to be the most successful exhibit of the kind ever held in the city. The Provincial, at London, also bids fair to eclipse the record of previous years—the entries already made indicating a large number of exhibitors.

THE advertisements in this issue are worthy a careful perusal. So far as we know every advertiser is in a position to do everything he proffers to do; and all are entitled to the confidence of our readers. Subscribers may rely that their interests will ever be consulted in the taking of advertisements for these columns, and money will never be able to buy space for questionable announcements of any kind.

THE eighth Annual Exhibition of the Provincial Agricultural and Industrial Society of Manitoba, will be held at Winnipeg on the 4th, 5th and 6th of October. All entries are to be mailed to the Secretary not later than September 15th. Competition is open to the world, except in certain classes such as fine arts. The prize list is very full, and well calculated to encourage excellence in every variety of production and in every department of industry.

The regular issue of THE RURAL CANADIAN will not commence until 1st January next. It is intended, however, to bring out two numbers this year, making, along with the specimen copy, three issues, which will be given to subscribers for 1882. In other words, parties subscribing on or before the 1st of November for 1882 will get three copies additional, FREE. Agents are respectfully asked to keep this point prominently in view when canvassing.

WE take it as an omen for good that so enterprising a man as Mr. Wm. Rennie, of Jarvis Street, Toronto, should be the FIRST subscriber to THE RURAL CANADIAN. Mr. Rennie's name will probably figure frequently in our columns, because he is not only a successful seedsman, but an intelligent and progressive farmer as well; so that our readers may count on having from his pen, from time to time, helpful words on his methods of culture, and many valuable hints suggested by his ripe experience.

SPECIAL attention is directed to the advertisement in other columns, of the new work entitled CANADIAN FARMING, now in press and about to be published. The book is a very valuable one, and well worthy a place in every farmer's library. The combination offer—a copy of the book and THE RURAL CANADIAN for a year—is so liberal that thousands of people will doubtless at an early date avail themselves of it, and thus, while swelling our subscription list, become themselves possessors of a fine family journal for twelve months, and a copy of a book "about farming, by farmers, and for farmers"—at the small outlay of \$1.50.

WE publish to-day the first issue of THE RURAL CANADIAN. It is hardly a fair representation of what the paper will be when all our contributors are in harness, and when our list of exchanges is perfected. What are intended to be regular departments are far from complete; indeed several are omitted altogether. Even with the drawbacks indicated, it will be found that the paper contains a large quantity of valuable reading; and without promising too much, we may safely say that subsequent numbers will more than justify the claim put forth in our prospectus, that THE RURAL CANADIAN will be made a first-class farm journal.

ATTENDING THE FAIRS.

Let this be more than merely taking a holiday. An exhibition is a school, where much valuable instruction can be obtained. Combine enjoyment and study. Keep eyes and ears wide open. Get into conversation with exhibitors of stock and other products. Inquire into their methods and successes. They are generally communicative, and like to talk about their exploits. They resemble old soldiers who are fond of relating the story of their campaigns. A large amount of useful information may be picked up in this way. Young people who visit the fairs would do well to take a note-book with them, and when they meet with anything worthy of preservation for future reference, jot it down. The memory is treacherous, but as the Latin proverb has it, "*littera scripta manet*"—what is written remains.

THE DROUGHT AND HEAT.

Accounts from all parts of the Province show that an unusually protracted drought has been experienced almost everywhere, and has caused much loss and great inconvenience. The heat also has been excessive. A very hot spell ushered in the month of August, and another attended its close. During the last four or five days of that month the temperature ranged from 85° to 105° in the shade. In this city the temperature on the 30th of August was higher than on any day of the season, except the 5th of July.

The western parts of the Province appear to have suffered most severely from the drought. Taking the whole of the month of August, the rainfall in the western peninsula was an inch and a quarter below the average fall for that month in previous years. Indian corn, fruit and root crops have suffered severely; with very few exceptions the pastures are brown and crisp; and many wells have gone dry, while most of the remainder furnish but a scanty supply of water. For weeks people have been under the necessity of driving their cattle some miles to water, or of carrying the precious liquid from a distance in barrels; and after all has been done the cattle have been insufficiently watered. From this cause, and from the almost total destruction of the pastures, dairy products have been very much diminished.

The eastern parts of the Province—between Lake Ontario and the Ottawa River—do not appear to have suffered nearly so much as the western. One eastern town reports too much rain, and the complaints from the whole of the eastern district the limits of which we have just indicated are comparatively slight.

This drought, even in the west, has not affected the principal grain crops to any appreciable extent; in fact, it rather facilitated the securing of those which had not been previously harvested. The season on the whole has been a favourable one; and, so far as the late root crops are concerned, September rains may yet make up for the deficiency of moisture in August.

THE AGRICULTURAL OUTLOOK.

A large proportion of the inhabitants of this country are, and necessarily must be, tillers of the soil. This was the primeval occupation of man, and in prosecuting it, human beings may be said to be in their native element. There is not, however, that contentment among farmers generally, which ought to arise out of the fact just cited. As a rule, you have only to place a living creature in its proper sphere or element, to make it contented. The lower orders of existence appear to know but little of the restlessness and dissatisfaction which are characteristic of the nobler animal, man. It may be said they have not mind enough to aspire to better things, and so remain content where and what they are. Still it is quite possible that intellect may be directed rather to the trials and difficulties of the human lot, than to the reasons for satisfaction with it. I shall not undertake to say that farmers are more given to discontent than other men. It is a besetment of the human family at large. But, certain it is, that there is more of complaint and murmuring in connection with agricultural pursuits than is compatible with a state of rural happiness. These arise from varied sources. Farming is hard work; it is not, in the usual sense, a money making business; our lands are considerably impoverished; shrewd management and close economy are necessary to get on at farming; much of our land is heavily mortgaged, and the constant struggle with debt is discouraging; our educated young people incline toward other pursuits; and so forth. It cannot be denied that there is much truth in these representations. But, *per contra*, let it be borne in mind that there is plenty of hard work outside of farming. The majority of human beings labour and are heavy-laden. Many strive in vain for that which is always secure on a farm—viz., a livelihood. Not a few industrious mechanics have known what farmers as a class are ignorant of, a scarcity of daily bread. The gains of farming may be slow, but they are sure. Life on a farm may be like Jordan, "a hard road to travel;" but most of the roads that lead through this world are of the same character. The farmer in this respect has no lack of company, with the exception of a favoured few, who are, after all, scarcely to be envied; the masses of humanity are destined to be toilers on the land or on the sea, and to win their bread at the cost of labour and care. If farmers were not so isolated; if they mingled more with their fellow-beings in town and city, they would speedily discover that their lot is by no means peculiar in this respect, and might, perhaps, congratulate themselves that, as compared with multitudes, they are so well off. The impoverishment of our soils, and the paucity of our crops, are agricultural evils that come very properly under notice, because their mitigation and removal are within our own sphere. We cannot make hard work easy; we cannot escape the necessity of toil, but we can do something to enrich our lands, and make our harvests more bountiful. Some of the disabilities under which farmers groan, are the direct result of an improvident system of agriculture. Despite all the lessons of the past, there are those who will mortgage the future for the sake of the present, and rob the soil this year at the cost of the years to come. Many farmers are very well aware that they are not giving their lands fair play. But they fully intend to do better hereafter. This is a mistaken policy, whatever the apparent or imagined necessity that leads to it. Honesty is the best policy with our land, as well as with our neighbours. Give back to the soil what is taken out in the shape of crops, and you are honest: fail to do this, and you are dishonest. The most encouraging feature of the farm outlook just now is the demand, apparently without limit, for fat cattle and sheep. To meet

this demand, stock must be fed on a large scale. The feeding process implies the manufacture of manure, and as that increases, the productiveness of our soil will also increase. With heavier crops, the use of machinery will pay better, the burden of debt will grow lighter, and farming will become a more attractive and remunerative business—less a matter of toil and plod, more a matter of knowledge and good management. A better style of farming will take the place of the old slipshod methods; brains will be in requisition on the farm as well as in the city marts of business; it will be seen that a good education is not thrown away at the plough-tail; the exodus of our young people from the country will be checked; and agriculture will assert itself as the grandest of all the avenues to wealth and fame. Such is the agricultural outlook as beheld from the editorial chair of the RURAL CANADIAN.

WHEAT FROM THE FAR NORTH-WEST.

Hardly have the farmers of Eastern Canada and Great Britain fully taken in the truth as to the suitability of the great North-West for wheat culture, and the cheap rate at which the staple grain could be raised, than another startling fact presents itself for acceptance. Owing to the peculiar character of the climate for the purpose, it now appears that wheat-growing in Manitoba and the regions around and beyond, out-distances all competition in the quality of the product. A writer in *Harper's Magazine* for September puts this matter in a very forcible light by a comparison of the grades of wheat that found shipment at Duluth, the great shipping point for the Red River country, and at Chicago, where the more southerly districts pour in their grain product. At Duluth, last year, eighty-seven per cent. of the wheat was grade No. 1, and eleven per cent. grade No. 2, leaving but two per cent. of grade No. 3 and rejected. At Chicago, only one per cent. of the wheat was grade No. 1; fifty-three per cent. was grade No. 2; thirty-four per cent. was grade No. 3; and 12 per cent. rejected. But Duluth No. 1 was counted better than Chicago No. 1, for when they met in a common market at Buffalo, Duluth brought \$1.18 per bushel, and Chicago \$1.14. The same relative valuation was put on the other grades. Wheat grown in Northern Minnesota, Dakota, Manitoba, and the North-West Territory, makes a better article of flour than that produced farther south. Bakers and private consumers recognize its superiority, and are willing to pay extra for it. The bread made from it is not only whiter and more nutritious, but a given number of pounds will yield more loaves. These are important and significant facts, and they have only come out quite recently. Formerly the northern wheat brought a lower price than that grown farther south. But the Minnesota millers hit upon improved processes of manufacture. These processes have been adopted throughout North America, and have even found their way to England. As the result, the claim of the great North-West to be considered the wheat field of the world, is now generally admitted by all competent judges. A rivalry is established which will put Eastern and British farmers to their utmost stretch of agricultural skill, and were it not for the freightage charges, they would be practically out of the race. But the cost of transportation, especially under the tariffs of the Canada Pacific and other monopoly roads, will give Eastern and British farmers a leverage of advantage, over which the superior quality of north-western wheat will have all it can do to triumph. In this country, the force of circumstances will compel the raising of wheat only on our best soils; and will divert the energies of our farmers in the direction of stock-raising, dairying, and fruit-growing. The great law of division of labour will assert itself.

Under its operation the North-West will provide the world's bread, while other sections of this country will find the human family in cheese, butter, meat and fruit. Productive industry will discover its proper fields and work them, so that the world's great mouth may be filled with food.

NEW DEVICES FOR TESTING MILK.

The Feser lactoscope is one of the latest instruments to test the comparative value of milk. By the lactometer the purity of the milk is not definitely ascertained, hence it is not satisfactory. The Feser lactoscope—so called from Prof. Feser, its inventor—takes advantage of the fact that the greater the amount of butter fat in the milk, the greater is its opacity. A correspondent of the *Country Gentleman* gives this description of this device:

"It is a glass tube closed at the bottom, which is somewhat contracted and open at the top. A small tube of milk-white glass, closed at both ends, is fixed in the bottom of the large tube, so that there is a free space between the small tube and large one. The white glass is marked with dark lines. The large tube is graduated in its upper part so as to show cubic centimeters on one side and the per centage of butter fat on the other. A cubic centimeter of the milk to be tested is put into the contracted lower end of the large tube, and occupies the space between the sides of the large tube and the white glass of the inner tube. The black lines cannot be seen through ordinary milk. Water is added until the lines become visible, and the point at which the mixture of the milk and water stands on the butter fat scale shows the percentage of butter fat in that sample of milk.

"Dr. Voelker, who has an article on this lactoscope in the *Journal of the Agricultural Society of England*, says: 'In most cases it shows without much trouble, in a few minutes, an approach to the real proportion of butter fat in milk, sufficiently near to enable an observer at once to form a pretty good estimate of the comparative value of different samples of milk.' Hon. X. A. Willard imported one of these instruments for his use, and he writes: 'I have tested the instrument since January. * * * So far as my experiments have been made, I have not failed in a single instance in getting satisfactory results, in all cases obtaining true indications, or a close approximation, of the quality of butter to be secured in setting any sample of milk.' Dr. Miles, in charge of Houghton Farm, brought back some of these instruments on his return from Europe last autumn, and has tested them thoroughly in his dairy. He tells me that with them a person can come within a small fraction of one per cent. of the amount of butter fat present, and it is so easily employed that any one can test milk in a very few minutes."

Another device, very simple and reliable, in showing the richness of milk, says the *Prairie Farmer*, is Heeren's Milktester, made in Hanover, Germany. We have seen this little device. It consists of a round, flat gutta-percha base, about two and a half inches in diameter, with a small circular space in the centre three-fourths of an inch across, on which a few drops of milk are placed. A circular piece of glass corresponding in size to the gutta-percha is colored in sections, and marked to correspond with color of cream, very rich milk, milk of normal quality, poor milk, and very poor milk. The centre of this circular piece of glass—which corresponds in size to the small space on the gutta-percha circle—is left clear so that the milk beneath it is visible. Through this clear circle the milk or cream is seen, and its relative richness in butter fat is determined by its colour through the clear glass. Cream gives the colour of cream, the dark colour of the gutta-percha beneath the sample not affecting its shade. Milk very rich in butter fat gives a darker shade, and the poorer the quality the darker its shade, as the background underneath it discloses its lack of density or richness. We have seen no one who has used either of these devices, but both of them seem practicable. The latter cost less than the former.

THE OLD FOLLY REPEATED.

The Portage la Prairie *Review* says:—

"Perhaps no more convincing proof can be given of the extraordinary fertility of the soil of this country than by the fact that although in many cases lands around the Portage have been cropped from twelve to twenty years in succession, the removal of the stable manure of the town is a matter of serious consideration for the Council. None of the farmers will have it, nor care to have it put upon

their lands, and it is being used to fill up hollows on the roads and highways, after large prices being paid for hauling away."

The above proves more than the extraordinary fertility of the soil in Manitoba. It proves also the extraordinary ignorance and improvidence of the farmers around Portage la Prairie. Time was when the same kind of folly was enacted in Ontario. Manure was left in unsightly heaps, or dumped into creeks, rivers, and lakes. Now it is the scarcest article of agriculture. The day is not far distant when Manitoba farmers will wish they had hoarded every speck of manure with miserly care, and used it to keep up the extraordinary fertility of their soil.

We wish specially to direct attention to the advertisement of Messrs. Warwick & Son, who are the Canadian publishers of several deserving English periodicals. No rural home in the Dominion, lightened by the presence of young folks, should be without the regular visits of the "Boy's Own Paper" and the "Girl's Own Paper." The other publications from the same house are first class.

WHAT IS SAID ABOUT US.

We have no doubt it will be well worthy the patronage of Canadian farmers, and we cordially recommend it to them. —*Lindsay Post*.

The good name of the publisher is a sufficient guarantee that the new journal will be equal to the best of its class. —*Strathroy Despatch*.

The price of the paper has been placed at the low sum of \$1 per annum which ought to be sufficient inducement for every farmer to subscribe for it. —*Peel Advocate*.

There is a guarantee of its value in the fact that the editorial pen will be in the hand of Mr. W. F. Clarke, one of the best authorities on agricultural subjects in Canada. —*Port Hope Times*.

It pays every farmer to take a good paper devoted to agricultural and kindred topics. Feeling that there is a field for such a publication in Ontario, Mr. C. Blackett Robinson, the enterprising publisher, has decided to shortly issue THE RURAL CANADIAN, a semi-monthly journal. —*Toronto Evening News*.

The journal will have a strong backing financially, and an able editorial staff has already been secured. A first-class fortnightly for Canadian farmers is sure to find a good constituency of readers, and at the low price of one dollar a year it can hardly fail to obtain a large circulation from the start. —*Toronto World*.

Now in Press and shortly to be Published.

CANADIAN FARMING,

AN ENCYCLOPEDIA OF AGRICULTURE BY PRACTICAL FARMERS.

Full Cloth Binding. Nearly Three Hundred Illustrations. Only \$1.50. Worth Double the Money.

The undersigned announces the early issue of Vol. I. of the "Ontario Agricultural Commission Report," which is a condensation of the facts and opinions as given at full length in the five remaining volumes. In this volume, complete in itself, will be found the results reached by the Commissioners; in fact, in its pages is given, in accessible form and conveniently arranged for ready reference, the cream of what is contained in nearly three thousand pages.

A glance at the table of contents will at once show that this book covers a wide range of topics—all of exceeding interest to the farmer, dairyman, live stock dealer, fruit grower, bee keeper, gardener, etc.

The following subjects are treated in detail, viz.:—Fruit culture; forestry and horticulture; insects, injurious and beneficial; insectivorous birds; bee keeping; poultry and eggs; general farming; dairying; horse breeding; salt in connection with agriculture; artificial manures; special crops—including flax, tobacco, beans and sorghum; agricultural education and farm accounts; meteorology; the Muskoka district; diseases of stock; stock laws and minutes of the several meetings of the Commission. The whole forming a work

Indispensable to every Farmer, and which only requires to be seen to be appreciated.

The *London Advertiser*, in noticing the book, says:—"So specific are many of the details entered into that each chapter may almost be considered a text-book or hand-book on the particular subject concerning which it treats. . . . It is profusely illustrated, and the engravings will no doubt be useful in guiding many readers to a clearer comprehension of the text than they would otherwise obtain."

MAILED FREE TO ANY ADDRESS ON RECEIPT OF \$1.50.

Special Offer to the Readers of this Paper.

CHEAP CLUBBING COMBINATION.

Subscribers to the RURAL CANADIAN paying \$1.50 to an agent, or omitting the same direct to this office, will be entitled to the paper for one year and a copy of CANADIAN FARMING as described above. The paper and book are clubbed at this low rate so that our subscription list for the RURAL CANADIAN may in a few weeks be increased to 20,000 names.

AGENTS WANTED everywhere, to make an immediate canvass; liberal inducements offered. Apply to

C. BLACKETT ROBINSON,
Publisher.

5 JORDAN STREET, TORONTO.

GARDEN AND ORCHARD.

THE POCKLINGTON GRAPE.

Several new hardy white grapes are before the public, but so far as we can judge, the most promising and interesting is that named after its originator, "The Pocklington." A chance seedling of the Concord, it partakes of the qualities of its parent to so great an extent that it might have been very properly called the White Concord. It is a strong grower, with large, leathery foliage, and has never mildewed, even in the most adverse seasons. As to its hardiness, only one proof need be cited. The original vine at Sandy Hill, N.Y., passed through 32° below zero last winter unharmed, and is, this season, loaded with an enormous crop of fruit. This iron-clad hardiness of the Pocklington is of the greatest importance to Canadian fruit-growers, especially those in the more northerly districts of our country. The fruit of this grape is reported as being of good quality, sweet, and melting; bunches large and strong,—with berries thickly set; berries large to very large, of a fine golden yellow, covered with a thick bloom. It is a great cropper, a three-foot section of the original vine is stated to have on it thirty (30) perfect clusters, which will aggregate from 20 to 25 lbs. in weight. A photograph of this branch is being executed with a view to having an engraving made of it. The Pocklington is rather earlier than the Concord. The Editor of this journal expects to have an opportunity of inspecting and tasting this grape in its native haunts the present fall, after which he will report his own personal opinion of its merits. Meantime, one or two testimonies from other sources may be quoted. C. M. Hovey, in a communication to the *London (Eng.) Garden*, pronounces "The Golden Pocklington," as large and handsome as a Golden Hamburg, as rich and transparent as a Thomery Chasselas, and quite as sweet; and this, with the Black Concord, the Red Brighton, and the Amber Rebecca, as the four finest grapes sufficiently hardy to stand 20 below zero.

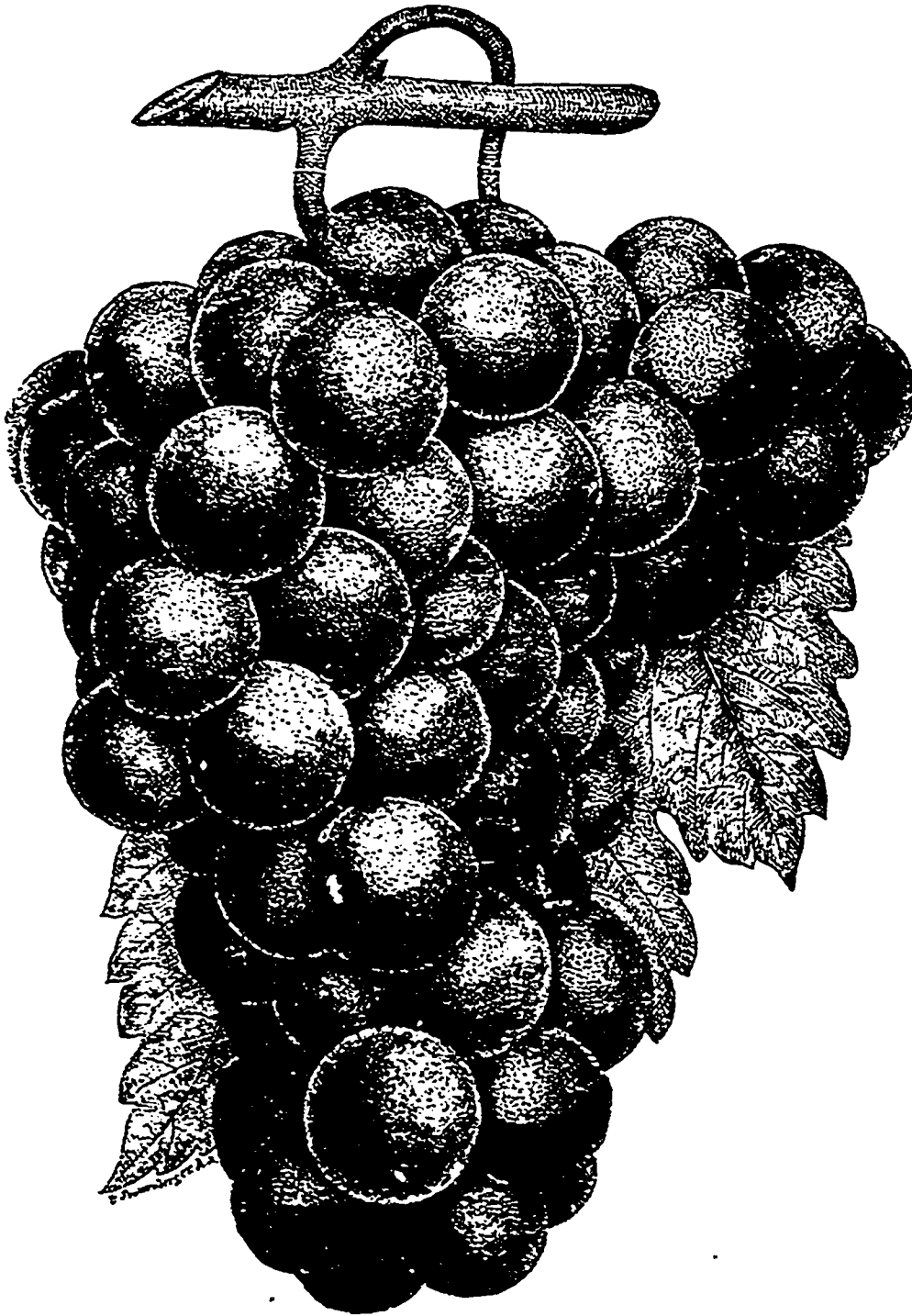
The judgment of the Fruit Growers' Association of Abbotston, P.Q., will carry great weight with it among Canadian horticulturists.

They exhibited twenty-seven varieties of white grapes on their tables last fall, and published in the *Illustrated Journal of Agriculture*, of January last, the opinions of the judges. Of the Pocklington they say:—

"The bunch is large or very large, in berry large, round, and a pale yellow. The skin is thin with slight pulp, pulp tough but not acid. In flavour sweet and quite luscious, with slight rankness or foxiness. It is said when fully ripe the pulp disappears and it becomes sweet to the very seeds. In quality it is stated by Messrs. Morris, Stone & Wellington, who control the grape, to be 'fully equal to the Concord at its best.' As we tasted it upon our Exhibition tables, it was superior to any Concord we have grown here, superior to that sent to the Montreal market from Ontario."

HAVE A GARDEN.

There should be a garden, however small, attached to every house. No home is complete without one. Man was made to live in a garden. It is his native place. There is both pleasure and profit in it. A refining influence goes forth from it. Children love a garden, and instinctively desire to have one for their own, their "very own." This desire should be encouraged. It is a pity when it is permitted to die out. All through life the love of a garden, if nurtured, will be a source of enjoyment to them. The habit of industry may be developed in this direction. Work will become pleasant in view of the reward it brings. Gardening is capable of being made an important part of the education of youth, and should by no means be neglected. It will be urged that many families are so situated that it is impossible for them to



have a garden. This is too true, yet most of these might do something in the way of window-gardening. Very pretty gardens may be made on the flat roofs of city houses. Dwellings with but small yards attached to them can be enlivened and beautified with climbing plants or with little flower beds. It is worth while to garden even in a small way and under difficulties. Farmers have every facility for gardening, yet there is many a well-managed farm that is innocent of a garden, or has only a tiny corner devoted to a few pot herbs or the commoner vegetables. A farm garden should be laid out on a somewhat large scale, and most of the work done by horse-power. Thus managed it

may be made the most profitable part of the farm. A supply of vegetables and small fruits is nowhere so welcome as in the country, where fresh meat is scarce, and a salt pork diet so common. Life on a farm is crowded with work, but squeeze in a little gardening and see how well it will pay in pleasure, in profit, and in health.

FALL PLANTING.

The question is often asked whether spring or fall is the better time to plant fruit and other trees. No answer of universal application can be given. It is undoubtedly an advantage to plant the smaller fruits in the fall. By these are meant raspberries, currants, and gooseberries. Being of low-growing habit, they are not affected by the strong winds, and are more easily sheltered from the cold of winter. They will make a more

vigorous growth next season, than if planted the following spring. Taller growths that catch the wind, are swayed about more or less, and do not get firm hold of the ground. These are better planted in the spring. Evergreens rarely, if ever, do well when planted in the fall. Whether fall planting is practised or not, *fall ordering* is very desirable. It is better to get the young stock, and heel it in, as nurserymen call it, than delay until spring. Heeling-in is temporarily planting a bundle of trees, aslant, that they may await a favourable time for spring planting. This has several advantages. Nurserymen are not so driven in the fall as in the spring; can make better selections of trees, in filling your order; pack them more carefully, and be more exact about names. With the trees on hand you can seize the most opportune time for setting them out. You are not hurried, for the trees are in a good state of preservation, and can be planted with care and deliberation.

By all means order in the fall, whether you plant in fall or spring. Let evergreens be the exception to this rule. They should not be lifted until spring.

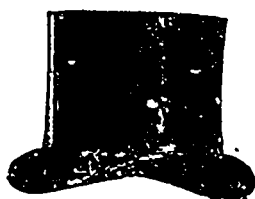
RIPE STRAWBERRIES.

City people seldom, if ever, get a ripe strawberry. To bear carriage well, they must be picked before they are quite ripe, and perfect ripeness

can only be got on the stem. Those who would eat this delicious fruit in its best condition, must grow it for themselves. This is a very easy matter. A strawberry plant is as easy of culture as a cabbage plant. A fertile soil, a good variety of strawberry, room to grow, and freedom from weeds, are the main conditions of success.

Muck is a valuable addition to poor, sandy land; it gives a better color and substance to the soil, absorbs and retains warmth and moisture, for which both raspberry and blackberry roots show a great partiality by following the muck deposit and making a more vigorous growth there than elsewhere.

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EXHIBITION VISITORS coming into Toronto should not fail to visit our store for Ladies' and Gents' Furs, Robes, Hats, &c. Prices low.

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Hatters and Furriers, Cor. King & Yonge Sts.

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Manufacturers of

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Wine and Spirit Merchant,

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EVERYTHING IN THE LINE.

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Fancy Goods, &c.

Visitors to the City always welcome to examine stock.

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HOME CIRCLE.

HOW MISS JENKINS "GOT OUT OF IT."

It was "writing afternoon,"—said Miss Jenkins,—and my scholars were new. If you had ever been a teacher, my dear, you would realize what the combination of those two simple facts implies—the weariness of body and the utter vexation of spirit. First, there's the holding of the pen. If there's one thing more than another in which scholars exhibit their own originality, it is in managing a pen-holder. Then, the ink: To some it was simply ink, nothing more. To others it seemed an irresistible tempter, whispering of unique designs, grotesque or otherwise, to be worked out upon desk or jacket, or perhaps upon the back of one small hand.

Well, upon the afternoon of which I am going to tell you, I had had more correcting to do than usual, for some of the scholars were stupid, and couldn't do as I wished; and others were careless, and didn't try. What with the looking, and stooping, and continual shewing, I felt my patience giving way, and when I saw that three of the largest boys had left the page upon which they should have been practicing, and were making "unknown characters" in different parts of their books, I lost it utterly. "That I will not have," said I, sharply, "I will punish any boy who makes a mark upon any but the lesson page."

They were very still for a while. Nothing was heard but the scratch, scratching of the pens, and the sound of my footsteps as I walked up and down the aisles. Involuntarily I found myself studying the hands before me as if they had been faces. There was Harry Sandford's large and plump, but flabby withal, and not over clean. His "n's" stood weakly upon their legs, seeming to feel the need of other letters to prop them up.

Walter Lane's, red and chapped, with short, stubbed fingers, nails bitten off to the quick, had yet a certain air of sturdy dignity; and his "n's," if not handsome, were certainly plain, and looked as if they knew their place, and meant to keep it.

Tummy Silver's, long and limp, besmeared with ink from palm to nail, vainly strove to keep time with a tongue which wagged uncertainly, this way and that, and which should have been red, but was black, like the fingers. His "n's" had neither form nor comeliness, and might have stood for "v's," or even "x's," quite as well.

Then there was Hugh Bright's hand, hard and rough with work, holding the pen as if it never meant to let go; but his "n's" were "n's" and could not be mistaken for anything else.

At length I came to Frank Dunbar's desk—dear little Frank, who had been a real help and comfort to me since the day when he bashfully knocked at my door with books and slate in hand. His hand was white and shapely; fingers spotless, nails immaculate, and his "n's"—but what was it that sent a cold chill over me as I looked at them? Ah, my dear, if I should live a thousand years, I could never tell you how I felt when I found that Frank Dunbar had written a half dozen letters upon the opposite page of his copy book!

"Why, Frank," said I, "how did that happen?"

"You did it before I spoke?" said I, clinging to a forlorn hope.

"No, 'm; I did it afterward. I forgot."

"Oh, Frank! my good, good boy! How could you? I shall have to punish you."

"Yes, 'm,"—the brave blue eyes looking calmly up into my face.

"Very well; you may go to the desk."

He went, and I walked the aisles again,—up and down, up and down, giving a caution here or a word of advice there, but not knowing, in the least, what I was about. My thoughts were all with the flaxen-haired culprit, who stood bravely awaiting his penalty. Vainly I strove to listen to my inward monitor. It seemed suddenly to have become two-voiced,—the one tantalizing, the other soothing, —and, of course, the tones were conflicting.

"You must punish him," said one.

"You mustn't," said the other.

"He deserves it."

"He doesn't."

"He disobeyed you flatly."

"But he forgot—and he has always been so good."

"But you promised. You have given your word. Here are thirty boys to whom you should be an example. Do you think they are not watching you? Look at them!" I did look at them. Walter Lane's sharp black eyes and Harry Sandford's sleepy orbs were fixed curiously upon me. Not were these all. Gray eyes, blue eyes, hazel and brown eyes—all were regarding me intently; I almost fancied that they looked at me pityingly. I could not bear it.

"Attend to your writing, boys." Then I walked slowly up to the desk.

"You see how it is," said the troublesome voice. "You will certainly have to punish him."

But I had thought of a possible plan of escape. "Frank," said I "you have been disobedient, and you—you know what I said, but—you are such a good boy that I cannot bear to punish you—not in *that* way, I mean. You may go to the foot of your class, instead."

"I'd rather take the whipping." The honest, upturned face was very sober, but betrayed not the least sign of fear, nor was there the slightest suspicion of a tremble in the clear, childish voice.

"Bless your brave little heart," thought I. "Of course you would! I might have known it," and again I walked the aisle, up and down, thinking, thinking.

"You will have to do it," repeated the voice. "There is no other way."

"I cannot,—oh, I can't," I groaned, half aloud.

"The good of the school requires it. You must sacrifice your own feeling and his."

"Sacrifice his feelings! Loyal little soul!—good as gold, and true as steel!"

"No matter, you must do it."

"I won't!"

I walked quickly to the desk and struck the bell. The children looked wonderingly. "Listen to me, boys," said I. "You all know that Frank Dunbar is one of our best scholars.

"Yes, 'm—yes, 'm!" came from all parts of the room, but two or three of the larger boys sat silent and unsympathetic.

"You know how diligent he is in school, and what a little gentleman, always."

"Yes, 'm. That's so. We know." Only two unsympathetic faces now; but one of them, that of a sulky boy in the corner, looked as if its owner were mentally saying: "Can't think what your driving at, but I'll never give in—never."

"You all know how brave he was when Joe Willis dropped his new knife between the boards of that unfinished building on Corliss street. How he did what no other boy in school would do—let himself down into the cellar, and groped about in the dark until he found it for him."

"We know that—yes, 'm. Hurrah for—"

"Stop a minute. One thing more."

Sulky-boy's companion was shouting with the rest, and Sulky-boy's own face had relaxed.

"You all know," said I, "how he took care of Willie Randall when Willie hurt himself upon the ice. How he drew him home upon his own sled, going very slowly and carefully that poor Willie might not be jolted, and making himself late to school in consequence."

"Yea, 'm. Yes ma'am. Hooray for little Dunbar!" Sulky-boy was smiling now, and I knew that my cause was won.

"Very well," said I. "Now let us talk about to-day. He has disobeyed me, and—of course I ought to punish him."

"No, 'm, you oughtn't. Don't punish him! We don't want him whipped!"

"But I have given my word. It will be treating you all unfairly if I break it. He has been such a faithful boy that I should like very much to forgive him, but I cannot do it unless you are all willing."

"We're willing. We'll give you leave. We'll forgive him. We'll—"

"Stop! I want you to think of it carefully for a minute. I am going to leave the matter altogether with you. I shall do just as you say. If, at the end of one minute by the clock, you are sure you forgive him, raise your hands."

My dear, you should have seen them! If ever there was expression in human hands, I saw it in theirs that day. Such a shaking and snapping of fingers, and an eager waving of small palms—breaking out at last into a hearty, simultaneous slapping, and Sulky-boy's the most demonstrative of all.

"Disorderly" do you say? Well, perhaps it was. We were too much in earnest to think of that. I looked at Frank. His blue eyes were swimming in tears, which he would not let fall.

As for me, I turned to the blackboard, and put down some examples in long division. If I had made all the divisors larger than the dividends, or written the numerals upside down, it would not have been at all strange, in the circumstances.

And the moral of this—concluded Miss Jenkins (she had just been reading "Alice in Wonderland")—is that a teacher is human, and a human being doesn't always know just what to do.—*Mary C. Bartlett in St. Nicholas for August.*

BEST FRUIT AT THE TOP.

O, the apple trees up in the orchard!

Like wee chubby faces I see

The russets and pippins, sly peeping,

Between leaves a-twinkle at me!

And on the crisp breeze, as I'm longing

In vain for the beauties to drop,

A blithe, haunting song seems to whisper

"The best fruit is found at the top!"

O, the gaunted and moss'd boughs upward tossing!

They cradle me now in their arms,

And onward I gaze in the orchard,

The rivers, the uplands, and farms.

So, gazing far, far out from childhood,

That blight, breezy song ne'er will stop;

Fame, station, are won but by climbing;

"The best fruit is found at the top!"

—George Grefer.

WE MOTHERS.

O, what mischievous, troublesome children we have! How difficult it is to manage them, and to enforce obedience. How much patience we mothers need, and what a hard life we have! But the fault after all is really not so much in the children as in ourselves. Worn out with petty vexations and cares, burdened with secret sorrows and pain, we bring to the work no vitality, no enthusiasm, no heart, and gradually we come to move through the same routine of every-day duties in a sort of mechanical way, weak and spiritless, till the home seems like a tomb. No wonder the children eagerly seek to escape from it. No wonder that their pent up vitality and energy finds vent in noise and confusion distracting to their weary mothers.

But suppose we mothers hear some special good news, which animates our spirits and lifts the shadows from our hearts. O, how different then does all appear. Mother's face is radiant with smiles: she walks with an elastic step, and speaks to her children in cheerful tones; they catch the spirit and it pleases them. They are no better than they were yesterday, in one sense, yet they love their mother better, and that makes all the difference in the world in their outward conduct. They say to themselves, "How kind mother is! How pleasantly she smiles on us! She is not

cross to-day." And even though they may be as noisy as yesterday, she is too happy to notice it, or at least to be troubled by it. She looks upon the children's faults with a lenient eye, and as they, in a measure, really try to please her, she says to herself, "How much better they behave to-day?"

O, it is not the sea—

It is not the sea that sinks and shelves,

But ourselves,

That rock and rise with endless and uneasy motion.

We sympathize with each other. We cannot help it. Eye speaks to eye more plainly than ever tongue speaks, and the fire of enthusiasm which burns in our own spirits will flash through the windows of our souls to light up the eyes of our children and enkindle in them a similar fire which, though but a spark at first, may be fanned into a flame which shall burn with a steady and constant light, shedding cheerfulness on all around.

The mother may almost regard her children as a mirror. In their gloomy and listless looks she may see the reflection of her own trouble and perplexities. In their indolence or mischievous tricks she may see her own weariness or flagging health and spirits. The machinery is out of order, or she has neglected to wind it up. In their noiseless, cheerful diligence, their animated, happy looks, she beholds her own health and happiness, her own quiet, unwavering zeal, and unflinching love and patience.

Does not love beget love, gloom create gloom, mirth provoke mirth, cheerfulness send forth sunshine, and earnestness rouse the energies of all who behold it? So as true mothers we must seek to attain that self-command that shall enable us to keep our own trials and perplexities, our sorrows and anxieties, buried in our bosom, that outwardly we may be cheerful and bright. We must have that deep love for our children that shall lead us to enter into all their little joys and sorrows as if they were our own.

A heart at leisure from itself

To soothe and sympathize.

For our children's sake as well as our own it is important for us to keep ourselves in such a physical condition, by means of fresh air, rest, recreation, and all such means as are desirable and in our power, that we may enjoy life, and may have mental, moral and physical force enough to enter upon our life-work with enthusiasm; and last but not least, we must rely continually upon a help and strength beyond ourselves. Let us seek aid and direction from Him who is "an ever present help in time of trouble," and in His strength will we be strong.

A true mother never separates her own interest from her children's interest. She feels for them, she sympathizes with them, she assists them, ever firmly, gently, unwaveringly, guiding them in the right way. She rouses their dormant energies. She finds the secret spring which shall set the machinery to work in the right direction, and then puts it in order. If possible she so cultivates their moral feelings, the nobler part of their nature, that they may love to do right for the right's sake. All may not be influenced by the same motives. Resting assured that there are none who cannot be influenced, let the mother, by close study of the characters and dispositions of her children search out those motives which seem best adapted to influence them for good. And then, while with unwearied hands and heart she sows the seed, let her learn to wait patiently for the harvest.

What though difficulties and trials sometimes cross our path? Is that any reason why we should despair or give up our interest? With no obstacles, no difficulties, no evils to contend with, there would be no victory, no virtue, no success. "Rome was not built in a day." By steady adherence to the fixed principles of right, enforced in firmness and gentleness, and by an unflinching fund of love, and sympathy, and patience, if our enthusiasm fail not, we may accomplish all we desire. To us most of all is the promise and exhortation, "Let us not be weary in well doing, for in due season we shall reap if we faint not."

ANCIENT MARKETS.

Markets were originally gatherings of merchants and traders who came together for a general traffic in merchandise. They were a necessity in a disorganized state of society, when intercourse was dangerous. They probably originated in Asia, and were found to be the mode of commercial intercourse in Mexico and Peru when the Spaniards first discovered those countries. They were known in Europe in the seventh century, and had become widely spread in the twelfth century. From the fourth to the eighth century Europe was devastated by barbarian hordes, and the constant wars of four centuries destroyed commercial intercourse. Safety was found only in walled towns or near the castles of feudal barons; people living near each other were strangers to one another. Travelling was difficult and dangerous—the fine Roman roads had been broken up for military reasons or had fallen into decay; a habit had arisen of living by plunder, and predatory bands, which became so numerous and aggressive that the merchants were forced to unite and move in large bodies, well armed, selecting those seasons most favourable to travel. The romantic ruins of the Rhine were then the castles of the barons, who mercilessly extorted toll from passing merchants. Commerce was under a check. It is probable that the great fairs had their origin in the circumstance that the merchants from various countries encountered each other at the same places at about the same period of the year, and were thus enabled to exchange their articles of commerce. In the Middle Ages, also, a devotional spirit prompted people to visit the shrines of saints, about which grew up the abbeys and monastic institutions. These pilgrimages were usually made at the time of the great religious feasts. The trafficker in merchandise was religious, but with an eye to business, and he usually managed to carry with him a tempting assortment of goods. The religious exercises were not more striking than the busy scenes at the fairs established in connection with them—scenes which are reproduced to this day at the fairs at Mecca.

There were seven or eight great fairs or markets in Europe; the time for holding them was established by usage, or fixed by law. They were usually held in large plains seven or eight miles in extent; their management was entirely republican, and it furnished an example that was never lost sight of. Each fair had its president, twelve select men who were chosen from the body of merchants and formed a court for the settlement of all disputes, and for the punishment of all offenders; a body of police to preserve order. No lawyers were allowed in this commercial court, whose decrees were final, and whose sentences were carried into immediate execution. The court took cognizance of the misrepresentation or slander of another's merchandise; theft was one of the gravest crimes, and the thief was whipped and then fastened to an iron chain that he might be seen of all men. One singular feature of the law dispensed by this court was the ruling that the title to property bought in the fair was valid, whether the property was stolen or not. Buyers were strangers, who had no time or means of inquiring into ownership. No merchant could be arrested while on his way to or from the fair, or at the fair, except for an offence committed there. The fetters of the trade guilds were temporarily broken at the fairs, where there were no restrictions or exclusive privileges. The amount of transactions was immense.

The first fair in England was chartered by King John, and was held near Cambridge, the revenues going to a hospital. The second was the St. Audrey's fair, where the goods were so notoriously shoddy and bad that their characteristic qualities gave origin to the word tawdry. The greatest of these fairs was that at Winchester, the revenues from which were used by the Bishop of Winchester in the construction of the great cathedral that is second only to St. Peter's. These fairs came to be less and less for purposes of commercial intercourse, and more and more for amusement; they attracted the idle, the dissolute and profligate, and became such scenes of immorality as to render their suppression necessary. Thus it happened with St. Bartholomew's fair at Smithfield (now in the heart of London). This fair was held regularly for 700 years, and its history furnishes an ever-varying picture of the changes in public tastes and morals. It finally degenerated into a pleasure fair, where the immense attendance suffocated business. It was closed by the Government in 1855. The famous Donnybrook Fair, near Dublin, was begun for purposes of trade, and it also degenerated into a gathering for the pleasure of drinking and fighting. These fairs, or markets, differed very widely from the industrial exhibitions, which are of modern origin, and extend no further back than the close of the last century. The national industrial exhibition is a French idea, that has been made to bear fruit, not only in France, but in almost every country in Europe as well as in the United States. These modern exhibitions bring to a centre the industry of the country, and enable us to know its exact state; they create a mutual intercourse between the man of science, the manufacturer and the artisan; they arouse the spirit of emulation, and the desire to produce better objects more cheaply, and they dignify labour by giving it something to struggle for beside pecuniary compensation.

A FARMER'S SALARY.

A writer asks, "What salary does a farmer receive?" and thus answers his own question:

He receives the equivalent of a larger salary than ninety-nine out of a hundred of them are willing to admit. They underestimate their own profits, and over-estimate the profits of men living on a salary.

There is a great difference among those who live by farming. A great many work the soil because they cannot live by anything else. Many of this class hardly deserve to be classed as farmers. They lower the standard of farming as a business.

I believe there is no business by which a man can live so well with so much neglect as in agriculture. Still, nothing better repays good care and ability. It is rather slow to yield brilliant returns at the outset; so in any business.

The farmers' profits are concealed in the rise of lands, in improvements by ditching, clearing, and new buildings, more land, more tools, or better stock. Most farmers have no idea how much it costs them to live. They forget to figure in the pork, poultry, mutton, butter, flour, vegetables, etc.

The salary-man lives entirely by his individual efforts. In estimating a salary, we must do so by looking at the privileges enjoyed, the hard work of the brain and muscles, and the gain in property and improvements.

WHO GUIDES THE BIRDS?

Familiar as the migration of birds is to us, there is, perhaps, no question in zoology more obscure. The long flights they take, and the unerring certainty with which they wing their way between the most distant places, coming and going at the same period year after year, are points in the history of birds of passage as mysterious as they are interesting. We know that most migrants fly after sundown, though many of them select a moonlight night to cross the Mediterranean. That their meteorological instinct is not unerring is proved by the fact that thousands are every year drowned in their flight over the Atlantic and other oceans. Northern Africa and western Asia are selected as winter quarters by most of them, and they may often be noticed, on their way thither, to hang over towns, at night, puzzled in spite of their experience by the shifting light of the streets and houses. The swallow or the nightingale may sometimes be delayed by unexpected circumstances. Yet it is rarely that they arrive or depart many days sooner or later, one year with another. Prof. Newton considered that were sea-fowl satellites revolving round the earth their arrival could hardly be more surely calculated by an astronomer. Foul weather or fair, heat or cold, the puffins repair to some of their stations punctually on given days, as if their movements were regulated by clock work; the swiftness of flight which characterizes most birds enables them to cover a vast space in a brief time. The com-

mon black swift can fly 276 miles an hour, a speed which if it could be maintained for less than a half day, would carry the bird from its winter to its summer quarters. The large purple swift of America is capable of even greater feats on the wing. The chimney-swallow is slower—ninety miles per hour being about the limits of its power; but the passenger pigeon of Canada and the United States can accomplish a journey of 1,000 miles between sunrise and sunset. It is also true, as the ingenious Herr Palmén has attempted to shew that migrants during their long flights may be directed by an experience partly acquired by the individual bird. They often follow the coast line of continents, and invariably take on their passage over the Mediterranean one of three routes. But this theory will not explain how they pilot themselves across broad oceans, and is invalidated by the fact, familiar to every ornithologist, that the old and young birds do not journey in company. Invariably, the young broods travel together; then come, after an interval, the parents; and finally, the rear is brought up by the weakly, infirm, moulting and broken winged. This is a rule in autumn. The return journey is accomplished in the reverse order. The distance travelled seems, moreover, to have no relation to the size of the traveller. The Swedish blue-throat performs its maternal functions among the Laps, and enjoys its winter holidays among the negroes of the Soudan, while the tiny ruby-throated humming-bird proceeds annually from Mexico to Newfoundland and back again, though one would imagine that so delicate a little fairy would be more at home among the cacti and agaves of the *Tierra Caliente* than among the firs and fogs of the north.—*London Standard*.

THE NOBLEMAN.

I deem the man a nobleman

Who acts a noble part,
Who shows alike by word and deed,
He hath a true man's heart,
Who lives not for himself alone,
Nor joins the selfish few;
But prizes more than all things else,
The good that he can do.

I deem the man a nobleman

Who stands up for the right,
And in the work of charity,
Finds pleasure and delight;
Who bears the stamp of manliness
Upon his open brow,
And never yet was known to do
An action mean and low.

I deem the man a nobleman

Who strives to aid the weak;
And sooner than revenge a wrong,
Would kind forgiveness speak;
Who sees a brother in all men,
From peasant unto king;
Yet would not crush the meanest worm,
Nor harm the weakest thing.

I deem the man a nobleman,

Yes! noblest of his kind,
Who shows by moral excellence,
His purity of mind;
Who lives alike though good and ill
The firm unflinching man,
Who loves the cause of brotherhood,
And aids it all he can.

MANAGEMENT OF BABIES.

In almost every newspaper we pick up we see something about the management of stock or poultry, but we seldom see in newspapers anything considering the management of children during their babyhood.

I do not pretend that my general knowledge is greater than that of any one else, but I do claim that I can take good care of babies and raise healthy children. And will not every one admit that good babies are a great source of comfort to parents, while cross babies and crying children are an annoyance and a source of anxiety to them?

I will therefore proceed to tell the readers of the household how I treat my babies. And I will say right here that I am not very healthy myself. I have had nine children, and have never had a cross or sick child. And this is the way I manage:

I try to keep them comfortable. From the middle of September till the middle of May I keep flannel skirts on my children, and from the time they are two weeks old I wash them all over every morning in clean luke-warm water, rubbing them as hard as they could bear with a good linen towel. Then I dress them immediately and give them their breakfast. When this is done I put them in a good warm cradle-bed, and go about my morning work, sometimes singing some familiar hymn. Being thus engaged with my work, baby will go to sleep, which it is sure to do, and very often it will sleep the greater portion of the forenoon. If a child is fretful it will generally be found that it is because it is uncomfortable. And what the mother needs is to keep their feet warm and their bodies clean. When this is constantly attended to, a baby will be almost sure to thrive and be contented, if it has proper nourishment, so as not to become hungry. A great many persons ask me why my children are so good. And when I tell them my mode of treating them, they say: "I can't take time to wash my baby every morning;" or "if I but wash my baby's head and face it gives it a cold." The trouble is she does not wash the baby often enough.

I love clean, sweet children; but I don't like to pick one up that smells as though it had never been washed, or never had on clean clothes. It does not take half as much time to take care of a baby properly as it does to take care of it by managing improperly. Just try my plan, you who have the care of little ones, and you will be rewarded.

HINTS FOR LADY READERS

ONE of the prettiest flowers a lady can have is Sweet Pea. It is fragrant also, and a constant bloomer.

A SMALL quantity of food well masticated and digested will give more real nourishment, and less trouble, than any very large meal.

If a bee or wasp sting you, squeeze out the poison between finger and thumb, or press quite hard the end of a watch key upon the part.

No single plant can be made to add more to the brilliancy and attractiveness of one's grounds during the early autumn than the Scarlet Sage.

In lifting a fern root be sure to cut a good knot of the soil in which it grows along with it, and take care to disturb the root fibres as little as possible.

Get an afternoon nap, if you can, every day. Every housewife ought to do this. It will tend to ward off the advent of a second wife in the farm house.

We recently heard of a mother, whose child had pushed a button up its nose, giving the child some black pepper to inhale. The button was sneezed out.

PIMPLES on the face denote an improper diet, too much grease, particularly pork and lard, or too much sugar and salt, or too much pastry, and the like, and perhaps too little out-door exercise.

PEOPLE should know that the more flowers are cut from rose bushes the more they bloom. They stop blooming when they have to mature seeds; and this is true of most flowering things.

A low priced steak by long and continued hammering, and then rolling in well-seasoned flour before frying, will be very tender, and retain its moisture quite unlike the proverbial fried leather of the Canadian cook.

LEMON juice alone will not take out iron rust, but lemon juice and salt and sunshine will. Saturate the stain and rub it well with salt, lay it in the hottest sunshine and repeat the application as often as necessary.

NEVER iron a calico dress on the right side; if ironed smoothly on the wrong side there will be no danger of white spots and gloss, which gives a new dress "done up" for the first time the appearance of a time-worn garment.

Do not iron a red tablecloth at all, wash it carefully in warm suds (not hot); rinse well, and when ready to hang on the line take great pains to pull it so that it will keep the proper shape. It will retain its color much longer than if ironed.

PREPARE earth now for potting flowers in the fall, if so long delayed. Pieces of sods from an old pasture, piled in alternate layers, with cow-droppings, to rot. These, with some road sand, are the requisites, and a little "wood dirt" will do no harm.

Do not sprinkle flowers and plants frequently in a dry time, but give an occasional thorough soaking. Make a basin around them, pour in an abundance of water, then draw back the dry soil. No backing, and the plants will not know there is a drought.

WAX quiet cannot be secured, and baby is worried out and can't go to sleep, and nobody knows what is the matter, a soft napkin or fine towel wet in warmish water and folded over the top of its head, eyes and ears, will often act as a charm, and it will drop off into a refreshing sleep in a few minutes.

THE best varieties of tomatoes for canning are those which have the most solid flesh. The canned tomatoes of commerce are not sufficiently "boiled down" to make a first-class article. When boiled to a thick and even consistency, they are of much finer flavour, and occupy less room in the bottles.

AMMONIA, properly used, is very beneficial for washing the hair. The usual fault is that too large a quantity is taken. A piece the size of a walnut should be dissolved in a quart of warm water, beaten to a lather with the hand, and well rubbed into the hair. After a few minutes the hair should be well rinsed with tepid water and dried with a soft towel.

SELDOM has there been such a rage for one colour as there is just now for pink. Blues and yellows are popular, it is true, but pink dresses for out-door wear are to be seen everywhere. Perhaps the reason is that satens and cambrics, of which such a large proportion of morning out door dresses are made, are so pretty in this colour, and look so well trimmed with ecru or white lace and embroidery.

It is exceedingly dangerous to the health to stew any kind of fruit in copper or brass kettles. It is a common occurrence when pickles become a little changed in the spring, to put pickles and vinegar into a copper kettle and boil them for a time and they come out much improved in appearance and handsomely greened. This bright color is acetate of copper, a virulent poison.

GRAPES are well suited for canning, tender or thin-skinned varieties being the best, provided the flavour is good. Grapes should never be canned without first removing the seeds. It is perhaps a saving of time to leave the seeds in, but it is a waste of bottle-room, and makes a poor quality of fruit. When grapes can be had plentifully, and are as cheap as they have been of late years, they can be made, at small cost, into a very palatable beverage by simply pressing out the juice, clarifying and sweetening it, and bottling it in any tight receptacle.

AMONG the peaches the Morris White has long been highly-prized for canning. This is a pure white peach, the main point in which it differs from other sorts being that it is white next to the pit. Most kinds of peaches have a reddish tint next to the stone. For my own use, I would prefer to can yellow peaches, as they have a higher color and a richer flavour. Pit-fruits as peaches, plums, etc., when canned whole with the pits inside present a very beautiful appearance, but of course the pits and interstices between the fruit take up much room, and the flavour imparted to the fruit by the presence of the pits may not always be agreeable.

YOUNG CANADA.

BROWN-WING'S MISSION.

"Little brown birdie, so chipper and gay,
What a good time you're having this sunbiny day,
A-singing and singing, and bobbing at me
From the very tip-top of the old apple-tree;
With no work to do and no lessons to learn,
While I am so busy I scarcely can turn.

"I say, little fellow, you do not know now
What fun you are having on top of that bough,
For all the day long you do nothing but play,
A-singing, and swinging, and bobbing away,
A-smoothing your feathers, and scraping your bill,
I say, little bird, could you ever keep still?"

"My dear little boy, I have heard every word
That you have said," cooed out the demure little bird.
"And I really must tell you it's all a mistake."
So giving her feathers a ruff and a shake,
With a quaint little nod of her wise little head,
These words in a queer little twitter she said:

"I've a wonderful nest in this old apple-tree,
And in it three birdlings are watching for me;
I feed them and care for them all through the day,
And at evening I tuck them all snugly away,
Then when I'm resting I sing for pure joy;
Don't you see I am busy? Good-bye, little boy!"

THE BIG DOG'S LESSON.

"THERE they are, Uncle Joe, the Dorking chickens, just where I found them."

"Pulled all to pieces."

"It was Mr. Bates' yellow dog—I know it was; and they've let him out again to-day. He'll be over and kill some more."

"No, he won't, Parry," said Uncle Joe, as he leaned over the barn-yard fence. "Don't you see what I've done for him?"

"You've let the chickens all out. Yes, and there's Bayard. Isn't he pretty?"

"Yes, he's pretty enough, but that isn't all. What did we name him Bayard for?"

"'Cause he isn't afraid. But won't he hurt some of the other roosters?"

"I've shut 'em up. See him."

The game cock was indeed a beautiful fowl, and he seemed to know it, too, for he was strutting around in the warm sun, and stopping every minute to flap his wings and crow. His comb and wattles were of a bright crimson, his wings and feathers of a brilliant black and red, and his long, arching tail feathers were remarkably graceful and glossy. He was not a large fowl, but was a very well-shaped and handsome one.

"There comes that dog, Uncle Joe, right over the fence."

"Yes, there he comes."

"Won't you throw a stone at him, and drive him away?"

"Then he'd come again, sometime when we were not here to throw stones at him."

Mr. Bates' yellow dog was a very big one. Perhaps he was not altogether a bad dog, either, but he had a sad weakness for teasing any animal smaller than himself. Cats, sheep, chickens, anything defenceless, would have been wise to keep out of his way if they could.

The two poor Dorking chickens had not been able to get away from him the day before, and so they had lost their feathers and their lives.

He had jumped the barn-yard fence now in search of more helpless chickens, and more of what he called fun.

A snap of his great jaws would have been enough to kill any fowl in that yard, and it would have crushed the life out of one of the little yellow "peepers" the old hens were now clucking to, if he had put his paw on it.

But Bayard, the game-cock, was neither a Dorking, nor an old hen, nor a chicken, and he did not run an inch when the big dog came charging so fiercely toward him. He did but lower his head and step a little forward.

"Oh, Uncle Joe! He'll be torn all to pieces."

"No, he won't. See!"

It was done almost too quickly for Parry to see, but the sharp spurs of the beautiful "bird" had been driven smartly into the nose of the big yellow dog, and the latter was pawing at it with a doleful whine.

The game-cock had not done with the barn yard invader. He meant to follow that matter up till he had finished it.

"Clip!" he had hit him again—in the left shoulder this time—and the dog's whine changed to a howl.

Another, a deep one, in the fleshy part of one of his hind-legs; for Bayard seemed disposed to dance all around him.

That was enough, and Uncle Joe's pet turned and flapped his wings and crowed most vigorously, and every hen in the yard clucked her admiration of his prowess.

Parry, too, clapped his hands, and felt as if he wanted to crow.

"He's such a little fellow, Uncle Joe, to fight such a big dog as that!"

"With teeth and claws, too, and a hundred times stronger than he."

"Did you know he could beat him?"

"Of course I did."

"He knew just how to use his spurs, didn't he?"

"That's it, Parry. He didn't have much, but knew just what to do with it."

"Guess the dog knows it, too, now. He won't chase any more of our chickens."

"He'll keep out of this yard for a while. He's got his lesson."

So had Parry; and Uncle Joe would not let him forget it. It would be a shame, he said, for any boy to be less wise than a game-cock, and not to be able to use all the natural gifts that he had.

A FOREST SCENE BESIDE THE AMAZON.

ON the third evening after our departure from Bogota, we encamped on the banks of the Rio Patamayo (a tributary of the Amazon), in a grove of majestic adansonias, or monkey fig trees. High over our heads we heard an incessant grunting and chattering, but the evening was too far advanced for us to distinguish the little creatures that moved in the top branches of the tall trees. The next morning, however, the noise recommenced, and we saw that the grunters were a sort of small racoons, and the chatterers a troop of *monos*, or capuchin monkeys.

After a consultation with the Indians, we fastened our monkey, Billy, to a string, and made him go up the tree as far as we could drive him without betraying our presence to his relatives. We had no traps for catching them, but our plan was to let them come near enough for us to shoot one of the mothers without hurting her babies. Billy's rope, as we had expected, got entangled before long, and finding himself at the end of his tether, he began to squeal, and his cries soon attracted the attention of his friends in the tree-top. We heard a rustling in the branches, and presently an old ring-tail made his appearance, and seeing a stranger, his chattering at once brought down a troop of his companions, mostly old males, though. Mother-monkeys with babies are very shy, and those in the tree-top seemed to have some idea that all was not right.

Their husbands, though, came nearer and nearer, and had almost reached Billy's perch, when all at once their leader slipped behind the tree like a dodging squirrel, and at the same moment we heard from above a fierce, long-drawn scream, a harpy-eagle was circling around the tree-top, and coming down with a sudden swoop, he seized one luckless mother-monkey that had not time to reach a hiding place. The poor thing held on to her

branch with all her might, knowing that her life and her baby's were at stake, but the eagle caught her by the throat, and his throttling clutch at last made her relax her grip, and with a single flop of his mighty wings, the harpy raised himself some twenty feet, mother, baby, and all. Then we witnessed a most curious instance of maternal devotion and animal instinct—unless I should call it presence of mind: when branch after branch slipped from her grip and all hope was over, the mother with her own hands tore her baby from her neck and flung it down into the tree, rather than have it share the fate she knew to be in store for herself. I stood up and fired both barrels of my gun after the robber, but without effect; the rascal already had ascended to a height of at least two hundred feet, and he flew off, with his victim dangling from between his claws.

COMBATS OF THE OCEAN.

AMONG the extraordinary spectacles sometimes witnessed by those who "go down to the sea in ships," none are more impressive than a combat for the supremacy between the monsters of the deep. The battles of the sword-fish and the whale are described as *Homeric in grandeur*.

The sword-fish go in schools, like whales, and the attacks are regular sea-fights. When the two troops meet, as soon as the sword-fish betrays their presence, by a few bounds in the air, the whales draw together and close up their ranks. The sword-fish always endeavours to take the whale in the flank, either because its cruel instinct has revealed to it the defect in the carcass—for there exists near the brachial fins of the whale a spot where wounds are mortal—or because the flank presents a wider surface to its blow.

The sword-fish recoils to secure a greater impetus. If the movement escapes the keen eye of his adversary the whale is lost; for it receives the blow of the enemy and dies instantly. But if the whale perceives the sword-fish at the moment of the rush, by a spontaneous bound it springs clear of the water its entire length, and falls on its flank with a crash that resounds for many leagues, and whitens the sea with boiling foam. The gigantic animal has only its tail for its defence. It tries to strike its enemy, and when successful finishes it at a single blow. But if the active sword-fish avoids the fatal tail the battle becomes more terrible. The aggressor springs from the water in its turn, falls upon the whale, and attempts, not to pierce it, but to saw it with the teeth that garnish its weapon. The sea is stained with blood; the fury of the whale is boundless. The sword-fish harasses it, strikes it on every side, kills it, and flies to other victories.

Often the sword-fish has not time to avoid the fall of the whale, and contents itself with presenting its sharp saw to the flank of the gigantic animal which is about to crush it. It then dies like Miccaus, smothered beneath the weight of the elephant of the ocean. Finally the whale gives a few last bounds into the air, dragging its assassin in its flight, and perishes as it kills the monster of which it was the victim.

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BAD horses are more frequently made than born. It is very much in the bringing up—in the way a colt is cared for, and the manner in which it is broken. Firmness, with kindness, goes very far in making a valuable horse. The colt should early learn that it is never to be deceived; that it is to be encouraged and rewarded when obedient, and punished by the withholding of caresses when disobedient. The same natural qualities that make a horse vicious, will, with proper treatment, make one of those intelligent and spirited horses that all desire to possess.

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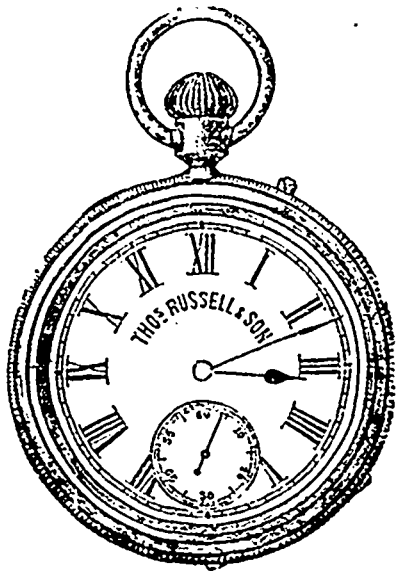
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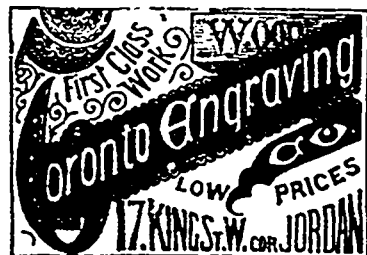
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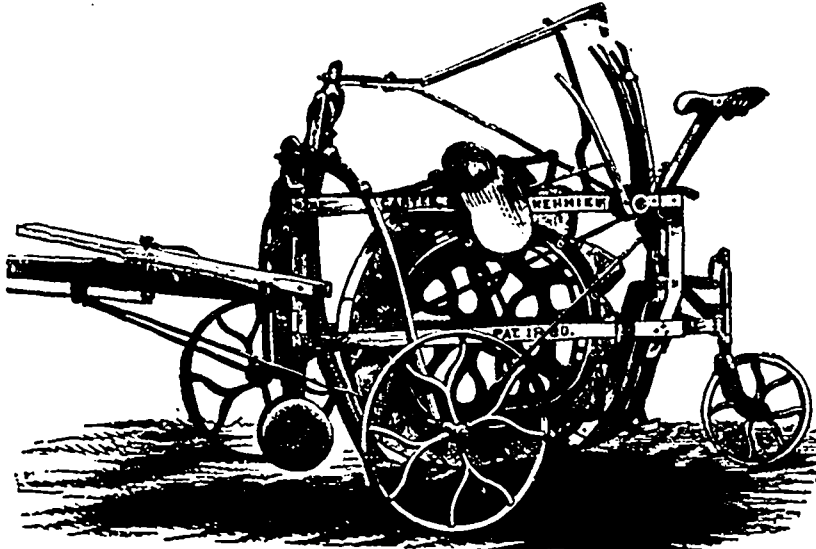
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