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# RURAL CANADIAN.

AND FARM JOURNAL. With which is Incorporated THE CANADIAN FARMER & GRANGE RECORD

Vol. VIII, No. 7.  
Vol. IV., No. 7—New Series.

Toronto, July, 1885.

\$1.00 per annum, in advance.

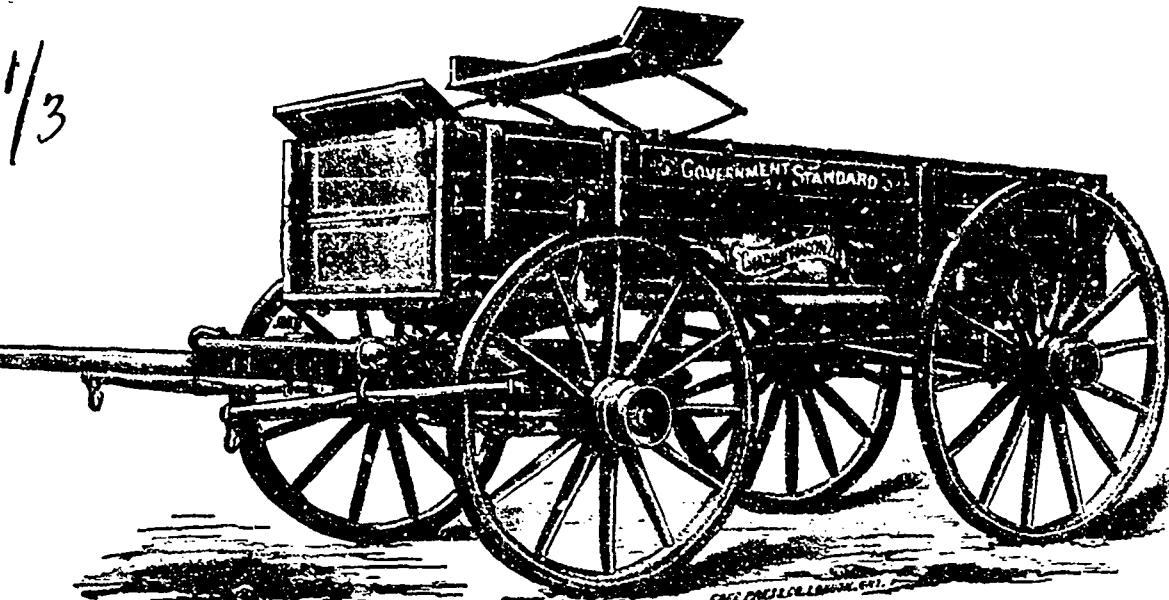


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# Rural Canadian and Farm Journal,

WITH WHICH IS INCORPORATED

## THE CANADIAN FARMER AND GRANGE RECORD.

Vol. VIII., No. 7.  
Vol. IV., No. 7 New Series.

Toronto, July, 1885.

\$1.00 per annum in advance.

### RURAL NOTES.

CORN for green fodder may be planted at intervals during the present month; millet, too, will make a fine crop on good land if sown within the next week or ten days.

WHEN the fruit of strawberries is off, the mulch should be removed and old manure forked in around the plants. All runners also should be cut off, unless new plants are needed.

HAND-FEEDING and tethering on the grass are good ways of bringing up a calf intended for the dairy. The more docile and affectionate it can be made, the more valuable it will prove to be as a cow.

GREEN posts are not lasting. The best of timber placed in the ground before seasoning will decay in a few years. Sap in wood causes decay sooner than rain water, and when green posts are set in the moist earth the sap cannot readily escape.

THIS is a good time for fattening chickens for the market, and with proper care and feeding they may be fitted in two weeks. Corn-meal mixed with hot, sweet skimmed milk gives the flesh a fine flavour and an appearance that adds to its market value.

To get the best price for young potatoes, they should be got to the market as early as possible. The man who has the start of a week gets the benefit of the highest prices. It is well to remember, too, that purchasers like to see neat, clean packages, and always want to get full measure.

IN a rainy season grape-vines are almost certain to be attacked with mildew, which is itself nothing more than a fungus growth. The best treatment is the application of flowers of sulphur, and if the first appearance is watched for and a prompt use made of the remedy there is not much fear of harm being done.

COLIC is one of the most fatal of all ailments to which the horse is subject. Prof. Gamgee says that more horses die of it than of any other malady. His remedy is an injection of four to six quarts of tepid water—say at a temperature ranging from seventy to ninety degrees. This generally affords speedy relief.

EARLY maturity, quality of flesh and lightness of offal are the cardinal points of a good pig for fattening purposes, and in regard to these points there is perhaps no breed that excels the small, black Suffolk. Added to its other qualities, is the important one that it is a prolific breeder—properly managed sows often having fifteen or sixteen pigs at a litter.

IN new settlements the pioneers invariably select first the high dry land as most valuable. It is less liable to malaria than the swamps, though the worst fever and ague is generally found on sandy soil adjoining low wet lands. After clearing and draining, the black swamp soil is almost always found to be most valuable. Its fertility endures the longest under cultivation.

A CALIFORNIA man has invented a machine for scouring peaches, to take the place of paring them for drying. The advantages claimed for it are a great saving of labour, increased weight from the saving of the material taken off with the skin, and better quality of the dried fruit, since the richest part of the fruit lies next the skin. The machine simply removes the fuzz.

SOMEBODY has discovered by an extended experience that ice water, or water a few degrees warmer than ice water, sprinkled upon cabbages during the heat of the day will kill the imported cabbage worm. Such an application in the hot sun causes them to quickly let go their hold on the leaves, roll to the ground and die, while the cabbages suffer nothing, but look all the fresher for the application.

HORSES need frequent drinks of water during the hot summer days, whether they be on the plough, the harrow, or the mowing or reaping machine. A man who takes a water-jug to the field to slake his own thirst now and then should think of his horses in the same connection, and if a well or stream be not convenient for the horses there is nothing to hinder his taking a barrelful to the field for their use.

DR. VOELCKER found that the average weight of clover roots on an acre was about three tons, and that this furnished one hundred pounds of available nitrogen, the most stimulating of all manures. This is one reason why a clover soil ploughed under is such good preparation for a wheat crop. Why clover sod will not always bring good wheat is due to the lack of phosphate, which this grain must have if anything more than a crop of straw is to be grown.

ALFALFA is essentially the grass for a region of light rainfall, and recent experiments in feeding it made in Colorado, show that it possesses excellent fattening properties. It is stated that three or four crops of it can be grown in a season, and it is equally good for cattle, sheep and swine. During the past winter ten to twelve thousand cattle were turned into prime beef upon it in Colorado, against 2,000 in the previous winter. This is a fact that will prove interesting to ranchmen in our own North-West.

MANY people do not understand the difference between Jersey, Guernsey and Alderney cattle. In fact, Jersey and Alderney are often used as synonymous terms. But the name Jersey is applicable only to the pure-bred animals raised on the Island of Jersey. No foreign cattle have been permitted to be imported into the Island for over a hundred years. The Alderneys, on the contrary, have not been kept pure, but are made up mainly of a cross of the Jerseys and the Guernseys on their original stock. The three breeds are quite distinct and should not be confounded.

FARMERS do not remember, as often as they should that all the profit from their land comes from combination of capital and labour applied to it. Bare land unworked and unstocked is unproductive. Remembering this fact they will be less likely to destroy their chances for profit by un-

wise economy in farm labour. The old saying that there is that which scattereth and yet increaseth, and that which withholdeth more than is meet that tendeth to poverty, is as true now as when Solomon uttered the proverb, and it is especially true of farm labour.

WHETHER phosphates are or are not good for manure depends on the character and composition of the soil upon which they are applied. Used on a soil that has no available nitrogen and potash, a phosphate would be of no use whatever; but when joined to these it forms a complete manure. One of the chief advantages of a phosphate fertilizer is, that it has an immediate effect on crops. Take well rotted manure it is at once seized upon by the plant and "gobbled up," so as to speak, and for that reason it is no doubt true that for staying qualities phosphates will not begin to compare with the ordinary manure of the barn-yard.

JULY is the best month of the year for weeds, especially if there be a good average rainfall. It is the month when farmers are busy with haying, and when the hoe and the cultivator are given a rest. Potatoes and corn must be attended to, but even these crops are left to shift for themselves when the work of mowing and reaping gets to be pressing. But any farmer who can spare the time at all, or who can hire the necessary help, will be well rewarded if he look carefully after the weeds. Not only will the corn and potato crops be all the better if the pigweed and the ragweed are kept under, but there is little risk of a crop of weeds ripening to stock the farm for years to come.

LOVERS of roses are often greatly annoyed by the attacks of the aphid, a little insect of greenish colour that feeds upon the under side of the leaf. Scores of these insects may often be seen on one leaf, and in a short time they devour the whole of the soft tissue. The leaves being destroyed, there is no chance for the development of the rose-buds, and a barren bush is the result. One of the best known means of destroying the aphid is to give it a dose of Persian insect powder. This is certain death to the aphid as well as to almost every other known insect, and there is no fear of injuring the life of the plant. Paris green is often used for the same purpose, but unless the solution be very weak the remedy is apt to prove as fatal as the disease.

THE cheese-makers of New York State find that they made a great mistake when they neglected to continue making a good article for the market. A number of years ago New York cheese bore a most enviable reputation in England, and then it was thought that they might trade upon that reputation and furnish the English consumer with a poor and cheap article; so they began the manufacture of skimmed-milk cheese. It was a grave mistake, and Canadian makers had the wit to profit by it. The New York article can hardly find sale in England now at any price, while the Canadian is eagerly sought after and the top prices of the market are paid for it. Let us trust that Canadian makers will profit by the lesson which the neglect of New York makers teaches.



## FARM AND FIELD.

For THE RURAL CANADIAN.

### WALKS AND TALKS AMONG THE FARMERS. NO. XIV.

In all parts of the country there are pleasing evidences of improvement in the style of houses, barns, and outbuildings generally. The old-fashioned, square, and untasteful structures are giving place to edifices with more or less architectural beauty. People are not satisfied with ample accommodation, but are beginning to care more for "looks." There is, however, a great deal to be learned yet about these matters. The importance of a good site is but little realized. To have a healthy home, a high and dry spot should be chosen. Many build in flat, low places for the sake of convenience, or because the earlier buildings were put there, and it would involve trouble and expense to remove them. It should be well understood that without thorough drainage it is impossible to have a wholesome dwelling. The cellar should be as dry as any other part of the house. Where this is not secured, unhealthy exhalation is sure to exist, and this is always detrimental to health. Medical men testify that typhoid complaints are very common in farmers' families, and these are always the result of un-drained premises. With proper precaution this class of disease may be banished from rural neighbourhoods altogether.

The great objection urged against high sites for dwellings in the country is that they are cold on account of exposure to wintry winds. Tree shelter is the natural and proper remedy for this. In clearing up a farm, provision should be made for protecting the buildings by leaving a sufficiency of the younger forest growths, and by planting evergreens. Instead of so doing, a clean sweep is usually made, and the building site laid completely bare. Tree-planting is one of the last things a settler thinks of, whereas it ought to be one of the first. As the result of the common practice, when a really good house comes to be built it stands out in a condition of naked exposure, and no building looks its best without proper surroundings in the way of trees, lawn, and shrubbery. These constitute the outside furnishing of a dwelling, just as tables, chairs, sofas, curtains and carpets form its inside furnishing. It takes time for trees to grow, and, therefore, even when the first, rude, temporary log structure is put up, if it is placed on or near the permanent sites for the dwelling, as it usually is, trees should be left or planted in such abundance as to admit of their being thinned out in course of time, when their growth becomes large and spreading.

Too often the house, whether old or new, stands in the midst of a "door-yard" full of chips, old logs, abandoned knots, broken boards, and all sorts of rubbish. The pig-pen, chicken-house, waggon-sheds, and various unsightly structures are not far away. Some things look better by contrast, but it certainly does not improve the appearance of a good house to have such surroundings. A house not costing half as much would look better with trees, lawns and shrubbery around it, and would create far more of the home feeling in the minds and hearts of its occupants. Even a log-house, festooned with creepers and vines, environed with trees and shrubs, fronted with a nice lawn, and having a gravel drive up to it, presents a far more attractive appearance than a costly mansion standing lonely and un-draped in the midst of a bare field, or a slovenly chip-yard. These beautiful surroundings are comparatively cheap. The facilities for making them are within easy reach. Yet how generally

they are neglected, even when every endeavour is being strained to erect a fine house. It reminds one of the story of Baron Rothschild, who was once asked why people thought venison such a luxury when mutton was better. He replied in his imperfect English: "People always prefer vat is dear to vat is sheep."

I was talking not long since with a well-to-do farmer who, many years ago, built a good, substantial stone house with some architectural pretension about it, for it had a gothic pediment over the front door. The sight was a commanding one, and the house was conspicuous to all the country round. But there was not a solitary shade or ornamental tree in front or at the side of it, and the road to it from the highway was a long lane which had not even been turnpiked, still less gravelled. I pointed out to him what an improvement it would make to have the front tastefully laid out, and a nice gravel drive made up the lane. Thinking the argument from utility would have the most weight, I urged how much better a good gravel road would be in the spring and fall than the muddy road his family were compelled to travel. He objected that it would cost too much. I asked, "How much?" He named \$30 as the probable cost. "Well," I said, "you have been here over thirty years, and I think you would have saved the account before now in shoe leather." "Oh no!" was the reply, "there is nothing harder on shoe leather than gravel." I ventured to dissent, and contended that mud and water were worse than gravel for wearing out boots and shoes, to say nothing of the discomfort to the wearers.

I do not think it would cost that farmer anything like \$30 to gravel a road up his lane. With abundance of first-class gravel on his own farm, it would be easy at odd times to do the job without feeling the expense of it. Calculating the time of team and the value of labour, it might foot up \$30 or even more; but farmers do not and cannot use that kind of arithmetic. Much is done on the farm which it would be folly to estimate at a money value, because it does not cost money, will not fetch money, and does not interfere with other work that will bring money. That man's lane is a worse piece of road than the public highway in the spring and fall. There is another farmer of my acquaintance, whom I sometimes visit, and the road into his place is always bad. Even in the summer time, when the highway is level and smooth, no sooner do you enter his gate than the road is rough and rutty, and as the house is pretty far back, there are two serious joltings in store for all comers and goers. I hold that it is discreditable for a man to have a worse road on his own premises leading to his own dwelling than the highway travelled by the miscellaneous public.

HOWEVER indifferent a man may be himself to such things, they are appreciated by his wife and daughters, and he has no right to ignore their comfort and tastes, even if he is unwise enough to be regardless of his own. I have not much sympathy with the blatant form of women's rights which covets the political arena, and aches to make a big noise in the world; but I am always ready to stand up for women's rights in the home circle, and in the matter of home surroundings. There is a great deal of petty tyranny in regard to these things of which men ought to be ashamed. I once heard a farmer who owned 400 acres of land refuse his wife and daughters a bit of ground in front of the house, which they wanted for a flower-garden, because it was enough to raise two bushels of potatoes. This is an extreme case, but there are hundreds, aye, thousands, all over

the land not much better. The wife is supposed to own one-third of the farm, yet is grudging an eighth or a-fourth of an acre for a flower-garden and shrubbery. One would think a husband and father would take so much pleasure in seeing his wife and daughters enjoy their plants and flowers, as to give them freely all the land they wish for garden purposes, and lend a hand now and then in helping them put it in order. But some cannot rise to such sublimity of feeling.

Fools never raise their thoughts so high,  
Like brutes they live, like brutes they die.

THE boys of a farmer's family are not indifferent to these things any more than the girls. A rustic youth likes to have a button-hole bouquet on Sundays and on holidays as well as the city bank clerk. Boys of an unsophisticated age love flowers and pretty gardens just as much as girls. If they are brought up by a rough father to despise such things and to think them silly, they may by-and-by come to consider it a sign of mauliness to laugh at their mother's and sisters' fondness for tasteful surroundings; but it is far more likely that they will grow tired of a home that has none of these attractions, and prefer to betake themselves to town and city where they abound. I have recently spent a few days in Hamilton, a city noted among other things for its many lovely private residences. I went there from a country neighbourhood where my own is almost the only dwelling that can boast an ornamental front with gravel drive, shrubbery, and flowers. It is a very simple and limited "lay-out," and beside the generality of places in Hamilton, a quarter or half-an-acre in extent, is "nowhere"; but as I have realized that nearly all the homes in my part of the country are destitute of even the small amount of attraction that surrounds my own, I have said to myself, no wonder young men who live on bare and unornamented farms are charmed when they come to a city like this, and are fired with ambition to go into business or enter a profession, that they may become possessors of one of those little earthly paradises of which they see so many here. It may seem to prosaic, matter-of-fact farmers a trivial thing to urge making home beautiful; but until this is done, and life in the country rendered more attractive, we shall have to deplore a continued and increasing exodus of young men from the farm to the city. "Home's not merely four square walls." It is more than roof and room. It "needs something to endear it," and outward charms are not without their influence in creating and fostering love of home.

W. F. C.

### WEEDS AND HOW TO TREAT THEM.

A correspondent of the *Cermantown, Pa., Telegraph*, writes:

"Of course one cannot in a short article for a paper treat the subject other than briefly and imperfectly, and can only refer to a few of the most prevalent and noxious. I read more complaints of Canada thistle than I do of all other weeds. I know it is a great nuisance, especially so when it abounds in grain crops of various kinds. I do not understand why so many remedies are proposed (and some of them nearly impracticable), when the simple remedy of mowing them at the right time is sure destruction to them. When in full blow do not wait for the seed to ripen; the germ for the next year is then perfected and mowing will be harmless to them then.

"Are you troubled with the common raspberry in your sheep and cattle pastures, sapping the soil and choking out the grass? The remedy is the same as for thistles; mow them at the right time, and I know from experience the remedy will be complete. The time to mow them is after

they are too much matured to sprout from the root, and not mature enough to complete the germ for the next season. Mow them between these conditions and they die.

"As the ox-eye daisy cannot be easily exterminated, especially in strong soil, manure heavily and seed to such grasses as you prefer or as the soil is adapted to and they will choke out the daisy so that its appearance will be subdued and humble, and only a small per cent. of the crop.

"But what can be done with witch grass? Don't let it get a foothold on your premises if you can help it. It is not a pleasant thing to get acquainted with, and very difficult to exterminate. I think I have seen the following remedy recommended. While it looks reasonable, I cannot speak from actual test. Let your soil be in good condition and plant or sow some crop that will be sure to grow very rank. Sow or plant thick; let the ground be completely covered, overshadowing the witch grass. This is said to be an efficient remedy; it would kill anything else. I have observed the habits of a weed called in some localities pigeon grass. I think it nearly allied to the various kinds of millet. While it is not very difficult to exterminate, it has a way of providing next year's seed that is curious, to say the least. When this weed has good luck and nothing interferes with it it will make, in good soil, from two to three feet growth with heads full of seed.

"I sowed a piece of greensward last spring to barley. Grasshoppers and drought destroyed the barley and there sprung up pigeon grass, which I mowed just before the seed matured, and as the season was considerably advanced, and the weed had not time to sprout from the roots and make the usual growth, it seemed to reason the question and started up new shoots, and I saw many of them with perfectly formed heads and matured seeds, some two inches high and others not more than an inch; and this seed was ready to use the coming spring and would grow as well as seed matured in the usual way."

#### ATTRACTIVE FARMS.

Now that our pioneer days are over, it should be the aim and ambition of every farmer to make his farm and his home attractive. What can be more attractive than a well improved farm, well stocked with improved farm machinery and improved stock; broad acres of bountiful grass, with a home on the same liberal basis, a pleasant home, with music, books and papers, and good living from their own vine and fig tree; a garden and orchard, with an abundance of the best varieties of vegetables and fruits; poultry, eggs, butter, cream, milk and meat, all fresh for the farmer's table, the envy of every city resident; a beautiful lawn, handsome shade trees, and things generally kept in order. Such a home is the highest ambition of many of our most successful merchants and manufacturers. These attractive farm homes do not drive away the farmer's boys, but they become interested in the stock breeding and the farm improvement. The liberal progressive spirit of the West, we are glad to see, is developing rapidly in this direction. Such progress begets prosperity and brightens our homes. We give the following from the *Orange County Farmer*, published in the best improved portion of the State of New York:

"Make your rural home beautiful. Lay out spacious grounds about the farm house, plant shade trees, lay gravelled roads and plant flowers. Don't lay up all your net earnings for the benefit of your heirs and the lawyers, but spend some of it in beautifying your home. The farmer who always shuts his eyes to the æsthetic features of this life and screws himself down to the task of

making money, loses a large portion, and the best portion too, of his existence. His home should be attractive to himself, to his wife, and above all, to his children. Unpleasant homes in too many instances drive the sons of farmers to the towns, to excitement and dissipation, and to woe. Such sons do not generally leave pleasant and beautiful homes."

#### MAXIMS OF THE MEADOW.

The old saying, no grass no cattle, no cattle no manure, no manure no crops, is as true to-day as when first spoken, remarks the *Western Agriculturist*. Grass takes care of him who sows it. "The meadow is the master mine of wealth. Strong meadows fill big barns. Fat pastures make fat pockets. The acre that will carry a steer carries wealth. Flush pastures make fat stock. Heavy meadows make happy farmers. Up to my ears in soft grass, laughs the fat ox. Sweet pastures make sound butter. Soft hay makes strong wool. These are some of the maxims of the meadow. The grass seed to sow depends upon the soil and here every man must be his own judge. Good pastures are so much cheaper than grain to raise stock. It is important to improve and preserve them. Improved stock and good grass will enrich the farmer, the state and the nation. Therefore, be sure to have good pastures.

#### WEATHER WISDOM.

When the weather is wet, we must not fret;  
When the weather is dry, we must not cry;  
When the weather is cold, we must not scold;  
When the weather is warm, we must not storm;  
But be thankful together, whatever the weather.

#### FRUIT DIET.

One of the most salutary tendencies of domestic management in our day is that which aims at assigning to fruit a favoured place in our ordinary diet. The nutrient value of such food, in virtue of its component starches and saccharine materials, is generally admitted; and while these substances cannot be said to equal in accumulated force the more solid ingredients of meat and animal fat, they are similarly useful in their own degree, and have, moreover, the advantage of greater digestibility. Their conversion within the tissues is also attended with less friction and pressure on the constructive machinery. The locally stimulant action of many sub-acid fruits on the mucous membranes deserves mention. Its control of a too active peptic secretion, and its influence of attraction exercised upon the alkaline and aperient intestinal juice, are points of more than superficial importance. To this action further effects, which aid the maintenance of a pure and vigorous circulation, are indirectly due. Dyspeptic stomachs, on the other hand, are usually benefited by a moderate allowance of this light and stimulating fare. It must be remembered, moreover, that every fruit is not equally wholesome, let the digestion be as powerful as it may. Nuts, for example—consisting as they do, for the most part of condensed albuminoid and fatty matters—cannot compare in acceptance, either by the palate or the stomach, with other succulent kinds, even though they contain in the same bulk a far greater amount of nutriment. A little of such fruit is enough for digestion, and that little is best cooked. Nevertheless, if we take fruit as a whole, ripe and sound, of course, and consider the variety, its lightness and nourishing properties, whether eaten alone or with other food, and its cheap abundance, we cannot hesitate to add our voice in support of its just claim on public attention. In former articles we have shown why vegetable produce or fruit should enter largely into the food of children. Well-chosen fruits are consequently for them as safe and beneficial as agreeable.—*Lancet*.

#### HOUSEHOLD HINTS.

The keys of a piano may be cleaned with whitening, used nearly dry; but there is no really effectual remedy unless the key-board can be removed.

LADIES who are troubled with faint spells or a feeling of trembling in the stomach, will doubtless be pleased to know that half a teaspoonful of aromatic ammonia, in a little sweetened water, will act as a quick stimulant, and give immediate relief. This can be purchased at any drug store.

A PRETTY and convenient way to serve oranges is this: Cut the oranges in halves across the sections. With a sharp knife separate the pulp from the skin, and divide it into proper portions to eat with a spoon. It can be done so nicely that it will not look as if it had been disturbed until it is immediately under the eye. A little sugar sprinkled into it improves the fruit, unless it is very sweet.

A GOOD wash for roofs and buildings is as follows: Slake lime in a close box to prevent the escape of steam, and when slaked pass it through a sieve. To every six quarts of this lime add one quart of rock salt and one gallon of water. After this boil and skim clean. To every five gallons of this add, by slow degrees, three-quarters of a pound of potash and four quarts of fine sand. Colouring matter may be added if desired. Apply with a paint or whitewash brush.

A CARPET in which all the colours are light never has a clean bright effect, from the want of dark tints to contrast and set off the light ones. Carpets of many gaudy colours do not last bright very long. Two colours only with the light and dark shades of each, will make a very handsome carpet. A very light blue ground, with the figure of shaded crimson or purple, looks extremely well; so does a salmon colour or buff ground, with a deep green figure; or a light yellow ground, with a shaded blue figure.

IN warm summer weather many persons feel an irresistible craving for something sour, and often gratify this desire by a free indulgence in pickles, or vegetables made acid with vinegar. This demand for acids indicates a deficiency in the acid secretions of the stomach, and the demand for an artificial supply is a natural one; but vinegar is not the best substitute. Lactic acid is one of the chief agents that give acidity to the gastric juice of the stomach in health. This is acid of sour milk, and therefore one of the best summer diet drinks that we can use is buttermilk. It satisfies the craving for acids by giving to the stomach a natural supply, and at the same time furnishing in its cheesy matter a good supply of wholesome nutrition. A man will endure fatigue in hot weather better on buttermilk than on any diet drink he can use.

A LADY writes to an exchange: "For three years I have lived in town, and during that time my sitting room has been free from flies, three only walking about my breakfast-table, while all my neighbours' rooms are crowded. I often congratulated myself on my escape, but never knew the reason of it until a few days ago. I then had occasion to remove my goods to another house, while I remained on for a few days longer. Among other things removed were two boxes of geraniums and calceolarias, which stood in my window, being open to its full extent, top and bottom. The boxes were not gone half an hour before my room was as full of flies as those of my neighbours around me. This, to me, was a new discovery, and perhaps it may serve to encourage others in that which is always a source of pleasure, namely, window gardening. Mignonette, planted in long, shallow boxes, placed on the window sill, will be found excellent for this purpose."

## HORSES AND CATTLE.

FOR THE RURAL CANADIAN.

## BREEDING FOR SEX.

BY ALLEN PRINGLE, SELBY, ONTARIO.

The last two issues of THE RURAL CANADIAN have contained articles on the above subject. The first, in the May issue, sets forth the law of sex thus: "When the bull is in better condition than the cows, there are most male calves, and when the cows are in better or equal condition with the bull, there are most female calves." The other writer, in the June issue, after giving his experience with the Stuyvesant theory of alternate heats producing alternate sex concludes that "Nature has reserved for herself the entire control of this matter, and that any attempt to interfere with it, or to produce certain results at will, can end in nothing but disappointment."

Having given much attention to this subject for many years both by study and observation, I venture to submit that both of these writers are greatly in error. That the law of sex should be involved in any such trivial and fortuitous circumstances and conditions as the first writer sets forth is *prima facie* very improbable, when we see nature's uniform methods of working in the whole realm of the known.

Two or three years ago a writer in the *Canadian Farmer* on the subject of "sex at will" set forth that the sex in offspring was governed by and dependent upon circumstances and conditions still more fortuitous and less reasonable than those recently given. He urged that careful observations should be made by all stock-raisers to the end that the law of sex might be discovered—observations as to the respective ages of the male and female, the time of year and time of day, the weather, duration of heat, etc., etc.

I wrote an article on the subject at the time for the *Canadian Farmer*, pointing out that the law of sex could not, and did not, depend upon any such absurd conditions; and that the time spent in making and recording such observations as suggested would be simply wasted. I may be permitted to repeat here a portion of what I then wrote to the *Farmer*.

It may not be generally known by RURAL readers who are interested in stock raising that the law of sex—at any rate in the mammalian department of the animal kingdom—has been well-nigh established on a firm, scientific basis. Since the days of Hippocrates, who lived over two thousand years ago, and who had a plausible theory of the law of sex, there have been many hypotheses to account for the sex of offspring in the animal kingdom; but the stubborn facts of experimental tests have resolved the theories and hypotheses into empty words with the single exception of that of the great German physician Sixt, whose hypothesis of sex has been of late years confirmed almost to absolute certainty by physiologists and other experimenters in different countries. Sixt's theory of the law of sex is this: In the male the right testicle produces male offspring, and the left female. In the female the right ovary produces male offspring, and the left female. The right testicle produces male "sperm-cells" only. And in the female the right ovary produces male "germ-cells" only; while the left ovary produces female "germ-cells" only. This is the theory briefly stated; and it has been confirmed and demonstrated—at least so far as the female is concerned—by numerous tests made by various operations in different countries. The experiments, so far as I know, all tend to prove the theory as far as the female is concerned; but with reference to the male there seems to be a few exceptions. The males of swine, horses, cattle,

sheep, rabbits, and other animals were operated upon, by partially castrating, with confirmatory results. Where the left testicle was removed and the right left, combination with different females resulted, in ninety nine out of one hundred, in male offspring, and *vice versa*. And the very few exceptions which did occur have been accounted for by an eminent physiologist without invalidating the theory. As the explanation of the exceptions involves technical points in physiology which would require some space to make clear I will not enter into that now, but may in another letter if any reader desires it.

To put this law of sex as here given to the practical test I would suggest to, indeed strongly urge, stock raisers and breeders to test the matter with their stock. If you do not wish to mutilate your fine stallion or thoroughbred bull for purposes of experimentation begin with your pigs and lambs, and you can make valuable experiments at little cost or loss. For my own part I have yet to see a failure. Remember, however, that it is well to operate on the males some months before using him—the longer the better—thus greatly diminishing the chances of failure for reasons afforded by the explanation of the "exceptions" already alluded to. Also the younger the animal when operated upon the more certain a successful result.

## HORSE BREEDING.

The following prize essay will be of value and interest to our readers:

"We need not say our subject is a deep one. That is perceptible at a glance. We must necessarily begin one step back of the first proposition embodied in the scale of points published for our direction, viz.: How should the colt intended for a stallion be reared? The first point under consideration should be the sire and dam of said colt, for they are the fountain head, and where the fountain is pure, the stream is pure. Therefore we should select our ideal offspring, if for draught, from a pure-bred sire and dam, of whatever popular breed we may fancy; if for a roadster, with the possibility of a trotter, from a standard bred trotting sire and dam, of model form and faultless action. No colt should be kept for a stock horse, be his form ever so perfect, whose parents do not combine absolute soundness with a perfect disposition; for any defect may hide itself for one generation, and develop in all its intensity in the next. The length of time the colt can stay with his dam may vary; as a rule not less than four months, nor more than six. During this time feed the dam liberally nourishing and milk-producing food, to insure a steady and progressive growth of the colt. Avoid long trips over rough roads, as it may do him permanent injury. Supply him with plenty of pure water, and break to lead and stand tied. It is easier done now than when older, and he will never forget it. Wean gradually, by letting him suck three times for a few days, then twice, then once till weaned. Give him fresh pasture, and be careful not to overfeed. Begin moderately at first, and increase gradually as he grows older. Feed at regular hours. Oats are the best grain for colts. During the winter season, in connection with hay and grain, vegetables may be fed advantageously once a day, or each alternate day. Give him free access to salt. Provide comfortable shelter to protect from cold and storm, and groom thoroughly once a day. This treatment will be sufficient until he is a three-year-old, except he may be broken to harness and given a light work in his two-year-old form.

"His service should not begin before three years old, and should be very limited—not more than twenty mares. A less number would be better,

though there be notable instances in the lot of two-year-olds.

"Having indicated the age and limit of the colt's stud service, we will now consider his treatment. Previous to the season he should have extra attention for a month or six weeks, in the way of care and feed. He should have a kind, gentle attendant, a roomy yard adjoining his box stall, where he can exercise at will, or may have three to five miles judicious exercise to harness every day (yard exercise is the least trouble and more likely to be practised than either road or farm work). He should have a regular hour for service once a day only, evening preferred. Feed clean oats, and occasional bran mash, and bright timothy hay. The amount will vary with different horses and requires judgment, the object being to keep the horse in a healthy and vigorous condition, neither thin nor extremely fleshy. The season over, pull his shoes, if shod (it were better he were not at this age) and give the freedom of his paddock. This treatment will be sufficient previous to and after maturity.

"In his second year's stud service, he will be four years old, and may have forty mares, well distributed through the season. He will be a developed horse at five years, and may have a complement of mares which will vary with different horses. Some horses may serve a hundred mares without impairing their vital energy more than others would with sixty. Here again one's judgment must be exercised. We believe the first named number to represent the extreme limit with a majority of stallions. It is a foregone conclusion that excessive service weakens the produce and the sexual power of the horse in after years; consequently it should be carefully guarded against. As a rule we would not feed any stimulant in order to increase the sexual vigour. Would never feed drugs. Eggs and wheat will put a horse in splendid condition, producing a sleek, glossy coat, and might be fed during the special treatment preceding the season.

"Great horses, like great men, have great mothers. The mare should be in a healthy condition when bred. During the period of gestation she should not be subjected to extreme work, either road or draught, and should have sufficient food to keep up condition. Let me mention in this connection that oats with a little oil-meal is the best grain food for pregnant mares during the winter season. The food consumed by the mare controls to a certain extent the healthy and perfect formation of her foal. It is a mistake to breed mares at two years old. They may be bred at three, and then it would be better to wait another year. It is not in accordance with the laws of nature or sound reasoning to produce offspring from infant parentage. Feed grain or walk for some time to prevent straining. Mares seldom refuse the horse the ninth day after foal. They should be tried in twenty-one days after, and every seven days for the succeeding month. If not in heat during this time, they are pretty certain to be in foal.

"The safest guide in breeding is to keep in view the maxim that like produces like, and breeding for what we want. A uniform type of draught, coach, park, saddle, running, road and trotting horses will be the result."

## RAISING CALVES.

Nearly every farmer can better afford to raise his cows than to buy. To keep a dairy in the best condition it is usually necessary to make some additions every year. Cows will grow old and need replacing, and usually there are some that fail from various causes to be profitable to keep, so that perhaps several new ones will be needed in one season. A farmer should be able to raise



cows as cheaply as any one else can for him, and when raised upon the farm there are some advantages over those that are bought. If a farmer is trying to improve his dairy, raising the calves from his cows, if from a good paternal ancestry, is just the way to do it, otherwise he might be able to get the right kind of heifer calves from those having good stock. There is much in making the right kind of a selection of calves, and then a good deal in raising them properly. It requires some time, care and patience to succeed well, but then it will pay. To do the best the calves should be kept separate so they will not suck each other, and in a clean pen. When the principal diet is milk, some attention is necessary to keep them clean by frequent change of bedding, as they should not be allowed to become wet and dirty. Good calves are raised in this country mostly on sour milk. At this season of the year nearly all of the cream can be obtained from the milk if desirable, while it is yet sweet, and this would be better than feeding sour milk. The milk should be warmed and not fed cold. Some care is necessary not to overfeed, especially while the animals are young, as this is liable to produce scours, which is very injurious to the calves. As they grow older more milk can be fed with safety. After a few weeks old a little good hay will be eaten, and many prefer keeping them in the barn perhaps as long as milk is fed to turning them out to grass, finding that in this way they do better. Where raised on sour milk it is usually practised to feed longer, sometimes until fall, when good large calves are obtained. After three or four weeks old it is often a good plan to feed a little provender of some kind, as ground oats, wheat, bran or middlings. This should be commenced in a small way and increase gradually until as much is fed as safe. Calves raised in this way and kept growing right along through the first winter, or indeed until two years old, will be in a fair way to make cows that will please the farmers better than those they are usually able to buy. It will pay to select the best heifer calves and then care for them in the best manner for the needs of the dairy, and if there should be more than is wanted on the farm it will be found more profitable to have a good heifer or cow to sell, rather than have to buy. Some of our dairy farmers make quite a business of raising calves to sell during the season, for which there has been a considerable demand for several years past. This is all right as it enables the farmer to dispose of their sour milk to advantage, but the choice calves intended for the dairy should never be disposed of and inferior ones kept, even if a large present price is offered, as this would be a ruinous practice in the end, and the farmers need just as good stock as those who are wanting to buy.

#### BEST BREEDS OF HORSES.

On this important subject Mr. W. W. Stevens offers the benefits of his great experience to the readers of the *Indiana Farmer* in terms following: Some farmers may take issue with us upon this subject under consideration, but we have no hesitancy in suggesting that the best breeds for the average farmer to cross his scrub, mongrel or grade mares upon are the heavy draught. They bring a horse that is a sort of "jack of all trades" on the farm, and if a surplus is produced they find a ready market at good prices, and it is not likely that this demand will be supplied for several years to come. And they will sell at any age, from a sucking colt up. Last season we had two half-blood Normans that we were offered \$90 apiece for at weaning time. They could now be turned into ready cash at any day at a considerable advance on the above offer, including cost of keep. In all our large cities there is a grow-

ing demand for stylish draught horses. They are needed for freight waggons, express waggons, omnibuses and heavy carriages.

The two most prominent breeds of draught horses are the Percheron-Norman and Clydesdale. The English draught and Cleveland Bay are good heavy horses and preferred by some, but they do not rank with Norman or Clyde. Their get upon our common stock do not give the satisfaction that the Clydes and Normans do, being deficient, to some extent, in potency, or power to transmit their best points. The average Normans are mostly gray, weighing from 1,800 to 2,200 pounds, and some still more. They have medium sized feet, round bone, very broad, heavy body, good head and neck, heavy quarters, and back a little low. They are generally good walkers, with a natural tendency to trot off at good speed. They mature early and probably make the best cross upon the common mares in the country. Their offspring sell more readily in the city market and command the very best price.

The Clydesdale are in colour mostly bay or brown, with white on legs and stripe on face. They are not so stylish as the Norman, being adapted more especially for heavy draught—any kind of work that takes a dead pull. They have a short neck, good head and back, finely formed hind-quarters, deep rib, round as a hoop, strong flat bone, heavy legs and shoulder more upright than the Norman. They weigh from 1,800 to 2,400 pounds. A cross made by breeding half or three-quarter bred Clyde mares to Norman horses we have found results very favourably. Some of the very best horses in the country have thus the combined blood of these two grand breeds. Clyde horses crossed upon grade Normans make a better animal, some think. It makes very little difference which way the cross is made. In breeding common mares it really matters little which of these two excellent breeds is selected. Which ever is preferred, it should be one that is pure-bred, either imported or having a verified pedigree. Individual excellence should not be overlooked. Where a good heavy draught horse is within the reach of the breeder his services should be procured by all means. The farmer had better pay \$20 or \$25 for a colt from a good thoroughbred than to breed to the country mongrel free of charge. So far as we are individually concerned the fee would have to go the other way in order to induce us to even think about breeding to a scrub. We have no axe to grind in this matter, be it understood, keep no stallion and have no interest in one. We speak from observation and experience and for the good of farmers who are or intend to become horse breeders.

#### PHOSPHATE OF LIME FOR CATTLE.

Dr. G. C. Caldwell, writing in the *Irish Farm, Forest and Garden*, says: Phosphate of lime is a compound of phosphoric acid and lime. The opinion prevails among those who have given the subject most careful study, by experiment and observation, that it is not the phosphate of lime as a whole that is so liable to be wanting in the food of cows or young animals, as one of its constituents, the lime; and, if that be the case, a piece of chalk will serve just as well to supply the deficiency as does the more expensive prepared phosphate. That there may be more danger of a scarcity of lime, especially if the ration be a rich one, or an extremely poor one, is shown by the following comparison: For 100 parts of phosphoric acid in bone there are 120 parts of lime; but in corn meal, bran, malt, sprouts, cotton seed, meal, mangolds, and milk, there are, respectively, only 18, 6, 10, 9, 44 and 80 parts of lime; but in hay of the grasses, clover, and wheat straw there are respectively, for 100 parts of

phosphoric acid, 220, 860, and 120 parts of lime. So large is the excess of lime in the hay that with a fair proportion of it, together with some concentrated food with its excess of phosphoric acid there will be no reason to fear that the ration is not well balanced in its mineral matters. But on rations made up mostly of straw, grain and roots it is evident enough that the balance might not be well preserved, and that a piece of chalk might be useful, where the animals could lick it; and the same might be the case with a young animal fed on milk and fine feed. Where the water of the country comes from limestone rocks and is hard, an ample supply of lime would doubtless be taken up in the water drunk, to make up for any lack in the fodder. A case in illustration of this occurred in Germany; a herd of cows having only a very pure, soft water to drink, were seriously affected with the disease called there bone-brittleness; when the herd was supplied with hard water the disease disappeared, but only to reappear when the cattle were put back on the soft water again.

The Island of Jersey has one head of cattle to every two acres.

The best breed is good care, good water, good feed and good barn.

Young and growing animals are the most profitable for the farmer.

Oats is the best feed for horses and colts in all conditions. It contains the elements for bone and muscle, for growth and strength. With the great increase in horse breeding in the Western States, we are glad to see the increased acreage of oats; besides, it is a healthy feed when ground and mixed with corn for other stock.

Trim the feet of your young horses to prevent trouble if neglected. Give them every attention if you expect to make first-class horses of them to sell at top prices. Don't tell the buyers they have never been half fed and never had a curry-comb on them, for if you have thus neglected your own stock, tell it not in Rome for humanity's sake and for your own good name. If you raise horses, take proper care of them, feed, water, shelter and curry them, or or sell them to some one who will.

The French work their stallions six or eight months in the year, thus preserving their health and vigour, while at the same time paying a revenue to their owners instead of being a heavy expense. It is also certain that regular work is an antidote for bad temper, and that stallions would be much easier to handle and have better dispositions were they subjected to sufficient labour to keep them in good health. A stallion in service should be in as hard condition as when in training if his colts are to be sound and healthy, a condition which they are not likely to be in if the stallion is a sleek, fat animal, with fat taking the place of muscle.

In the course of an article on the subject of food for horses, the *American Cultivator* says: Ground grain is the cheapest form in which nutriment can be given to working horses. But to produce the best effect, it should be mixed with cut hay, not to give greater bulk, for this the horse's stomach does not require, but to make the food more porous in the stomach, so that the gastric juices may more freely work through it. Meal alone, especially of corn which has scarcely any chaff, will compact in the stomach and be less easily digestible. The heavy chaff of oats is one of the reasons this grain is so valuable for horses feed. Another is that the oat abounds in nitrogenous or muscle-forming food, and is therefore worth more per pound where strength is required than corn or oil meal, whose chief constituents are carbonaceous or fat producing.



## SHEEP AND SWINE.

### IMPROVE THE SWINE.

Farmers differ very widely, remarks the *American Rural Home*, in their opinions as to whether swine are a profitable stock or not, some contending that they pay quite as well as any other stock, others asserting quite as positively that there is no profit in them. Now we have not the least doubt in the world that both of these classes are perfectly correct, as far as their own experiences go; that the one has found swine quite remunerative, that the other has found them a source of loss, eating off their heads, as the saying is.

Perhaps if we could understand just how these two classes of swineherds manage we should know how to make swine profitable. Were we to investigate the matter we should find, in our opinion, that the successful class keep one of the several breeds that so thoroughly digest and assimilate their food as to keep fat and thriving with anything of a fair chance, even on good pasture. We have had suffolks keep so fat on short pasture and house slops that we were really obliged to put them on scant rations to reduce their flesh so that they would breed. The same is true of the small York-hire, the Berkshire, the Essex and other breeds of English origin, while the larger breeds such as Poland China, Chester Whites, Jersey Reds, with anything like good feeding and management will make such good use of their feed as to keep gaining all the time. Nor is it necessary to keep thorough-bred swine to meet with success. A thorough-bred male crossed upon good grades, with little waste in their composition will beget a herd that can be made remunerative.

And then success depends quite as much upon the farmer as upon the breed of hogs. No farmer can make stock of any kind profitable unless he gives them close attention, studies their characteristics and wants, and supplies them, regularly, in sufficient quantities, with good, palatable, nutritious food. Some farmers will feed at irregular times, in varying quantities, food poorly adapted to their wants. Sometimes the ration will be deficient in quantity and the swine will linger around the feeding-trough, squealing for more; at other times he will dash in such a large ration that the animals will over-eat and suffer from indigestion in consequence. In neither case can the swine thrive and make sufficient pork to remunerate for the food.

There are other questions besides those of feeding upon which success with swine depends. Judgment in the selection of breeding sows, proper management of them during gestation, and, then, the weeding out of the litters. Not every pig farrowed will pay for raising. A sow with a large litter will generally drop one or more that will be runts and never pay for raising. If the litter be judiciously weeded out and no more left than the sow can properly supply with milk, success may be assured when failure would be certain were all left to grow. A medium sized sow might raise eight fine pigs that would make a liberal return for the feed given them when she would make a miserable failure with a dozen. So success with swine, as with all the other kinds of farm stock, depends mainly upon two factors, the man and the breed.

### BELLS ON SHEEP.

An exchange says: "Bell your sheep, farmer, if you want to protect them from dogs. The bells will last many years and still be worth half cost. There is no dog that would chase a flock of twenty-five sheep if each one had a bell on; the noise would be too alarming, he could not stand

it. A sheepdog is a great coward when at that business; he wants to do it sily and quietly, and could not bear an alarm of twenty-five bells."

Hanging a bell to the neck of every sheep in a flock is a new idea; but one for general purposes not practical or economical, unless we make the matter one of humanity. So far as economy goes, the bells would cost five times the loss by dogs, taking the average number of sheep killed as a basis of calculation, and further than apprising the flock master when the sheep are alarmed. A neighbour of ours had his sheep chased by dogs when five or six cow bells were borne by the flock.

Some dogs do not exercise any caution or fear when ravenous for a taste of fresh mutton. Our own flock was once chased into the barnyard near to the dwelling by two dogs, and three or four sheep killed there before we could succeed in getting bullets through the heads of the desperate curs.—*Tribune and Farmer*.

### HOW TO SELECT YOUR BREED.

First select the breed you desire, after a careful study of each. Whichever you select keep it pure and breed in the line, but not akin. The rage for indiscriminate and apparently aimless crossing of different pure breeds has ruined many a valuable herd and disgusted the young and inexperienced breeder.

Remember that it is only once in a long time that success in establishing a new breed is attained, and then only after long, patient, careful study and experience. Leave the experiments and disappointments in trying to form a new breed to those who have time, patience and money to expend upon uncertainties.

In buying, either for raising grades, porkers or thoroughbreds, if possible go and make your own selection. You know better what you want than anybody else; if you do not, you can tell the breeder what you want to accomplish better than you can write it. But if the distance is too great, write the breeder what you want and a description of the herd that you desire to breed to.

If you desire to breed to a mongrel or scrub, for feeding purposes only, most any thorough-bred will help somewhat, but a large, vigorous, good feeding pig, with fair symmetry, is as good as any. For breeding thoroughbreds, get the best possible. A few dollars extra is nothing compared to perfection of form, sound health, good style, fine action and good pedigree.

The ideal boar has a short head, wide between the eyes; fine muzzle; lively eyes; silky, upright or drooping ears; soft, mellow skin; long, fine, abundant hair, without bristles; short, well-knit, straight legs, standing well up on small, firm feet; heavy jowl and quarters; high, arching, short, full neck; well-developed sexual organs; full and rather compactly built body, broad loins, full stute, flanking low down on the leg, and of a strong, masculine appearance.

The sow should be much the same in form and style, except having more length and depth of body, longer in the leg and of finer appearance, having at least twelve teats.

### DRIVING A HOG.

Perhaps there is no other animal so contrary as a hog to drive or manage well, says a writer in *Farm and Fireside*, yet it can be done with perfect ease and success.

In my younger days I had the usual trouble with them which most farmers have experienced. On one occasion I had repeatedly tried to drive an old hog to a neighbour's, and it was necessary to cross two bridges, about fifteen rods apart, to reach my destination. She drove peacefully to

the first bridge, when she turned with a grunt, passed me and my helpers, and soon reached home. Repeated efforts resulted similarly, and the hog was mistress of the situation. I sat down to rest and wipe away the perspiration, telling the boys to go home and I would drive her along after I got rested, or I would give up that a hog was more than a match for me. I rested and thought, and thought and rested for two or three hours, rejecting several plans for outwitting her, when at last basket came into my head. Said I to myself, "I have got you now, you old brute!" and I made another effort.

This time, when she turned at the bridge, she jammed her head into the basket. She commenced backing up, I followed as fast as she backed until I had backed her to and across the second bridge, when I withdrew the basket, and she found herself a stranger in a strange place. She tried it but once more that day, with the same result.

Since then I have had no trouble in driving hogs, or with cross hogs in butchering time, or in taking young pigs from their mothers. A good strong, bushel basket in dexterous hands will baffle the most savage hog, and I presume a wild boar would make but few attempts to master a man if he was caught head first in a basket, for at that instant he begins to retreat backward, and would not be apt to charge many times.

### PIGS ON PASTURE AND GRAIN.

A good pasture is important to the health of pigs, and some think that the pigs should get all their food from the pasture. This opinion has been formed, because they think pigs do not gain in weight enough faster on grain with pasture, to pay for the grain. But they do not take into account the fact, that when pigs are put on a good luscious pasture, the succulence of the grass dilutes the growth made by the pig and adds weight fast, but this weight is not solid fat, but largely water. This weight must be ripened into solid fat by grain. If pigs run all summer on a good pasture without grain, although they may appear to have done well, yet when put in pen in the fall and fed on grain, they will not gain a pound in weight till this watery summer growth has been changed to solid fat by the grain. It sometimes takes twenty days' grain feeding to ripen the grass growth.

It is much better to feed a small amount of grain on pasture, and this will ripen the growth as fast as made. The grain is all well expended, and will pay a better profit than the same amount fed in the fall.

Small pigs should not be fed wholly upon corn. It is much better to feed two bushels of oats with one of corn, or better still, to feed oats and middlings. The young pig should grow its muscles and frame, and not lay on much fat. After the pig has stretched out its body all summer, then put on the fat and you have the finished animal. In fact, when grain is properly fed on pasture, pigs will begin to lay on fat as soon as the frame is sufficiently grown, and they are often in good condition for market in the fall, taken directly from pasture. So we think the grain fed on pasture is even more profitable than that fed afterward.—*National Live Stock Journal*.

A CORRESPONDENT of the *Prairie Farmer* rises to say: When I find a sow that eats one of her pigs, I take the partly devoured pig, and pour over it some kerosene and then place it again in the pen. It is not at all likely that the sow will touch it, nor is it likely she will eat any more of her pigs. If a sow, after being thus treated, still eats her pigs, I discontinue to breed her, and place her among those fattening for market.

## POULTRY AND PETS.

## MANAGEMENT OF POULTRY.

Mr. Editor,—In continuing my letter on the management of poultry, I would say, as this is the season of the year when people are more or less troubled with sitting hens and hens wanting to sit when they are not wanted, it will be well for such people to have a small yard of lath or wire fence, say eight or ten feet square, to put such hens in for the purpose of treating them properly to get them out of the notion, and, in the common term, to break them up. This yard should be in a light open place with no nests or material to make one, and then by feeding mixed food, chop and bran, with an extra supply of egg and shell material mixed with the food, so that they must eat it if they eat the food; also add a little red pepper and salt, with plenty of grass and fresh meat. Four days of such treatment will put them out of the notion of sitting and they will begin to lay again. I do not mean to say that they will lay in four days; but they will be far enough advanced in that direction to have no inclination to return to the old nest and can safely be put with the rest of the flock.

During the time they are in the clucking pen do not feed any corn, peas or barley; wheat and oats at evening will be found the right thing for them. Be sure that they have plenty of fresh water to drink and a dust bath made of ashes and sand, in which put a pound of sulphur.

I have been experimenting this season on nests for sitting, and am fully convinced that a sod nest is not a good one. They are too hot. A far better nest can be made either of coal ashes or leached wood ashes put in a box and made damp, then put a good quantity of lawn grass in to make it comfortable. It will be a good plan to put a few cedar cuttings, such as hedge clippings, in the nest. Vermin do not like cedar. Any one who tries this kind of a nest once will not use a sod nest again.

After chicks are hatched out do not allow them to stand on the cold ground during the night, they will not do nearly so well as on a dry board floor with some sawdust or chaff under them. I have found that chicks are sure to get diarrhoea when they are allowed to stand on the ground at night. I find that dry, fine sawdust is a splendid thing for them to sleep on. Many imagine that chicks always stand up while sleeping, which is a great mistake. They often lie stretched out on their sides like a lot of kittens, and seldom remain all night in a standing position. Any one who is sceptical on this point had better take ten or twenty young chicks into the house the day they are hatched and place them in a shallow box in which an old flannel is laid, and cover them over with a light flannel, cover so that it rests on the chicks; then examine the happy family from time to time and you will find that they sleep, and soundly too, providing the temperature is about ninety to ninety-five degrees. I had a box of this kind in the house two days last week with thirty white leghorns in it, and some of them were taken from the nest before they were dry, and after they were fed twice and about thirty-six hours old I gave them to two hens. I went and chose two kind, quiet hens which were sitting and gave the chicks to them, placed the coops close to each

other and the chicks all mix up. Sometimes one hen will have most of them, then the other will call and away they go to her. They have not quarrelled over them nor do they offer to hurt the chicks, and, so far, I have not lost one of this lot. There is nothing like giving the little fellows a good send off. The first ten days is the most important time in the raising of healthy chickens. If they are safe and healthy when ten days old and free from insects, they will almost look after themselves.

Parties raising large quantities of chickens will find it a great advantage to use a bone mill and mix fresh ground bone meal with their food two or three times a week. Some one will ask what I did with the eggs which were under the two hens when I removed them to the coops. Well, I gave them to the hens that hatched out the chicks and by the time they sit ten or fifteen days longer they will be more suitable to take care of a brood of chicks.

Yours truly,

Jagersoll, June 20, 1885. G. E. PERKINS.



CRESTED POLANDS.

## MEDICINE AS PRACTISED BY ANIMALS.

Mr. G. Delaunay, in a recent communication to the Biological Society, observed that medicine, as practised by animals, is thoroughly empirical; but the same may be said of that practised by inferior human races, or, in other words, by the majority of the human species. Animals instinctively choose such food as is best suited to them. A large number wash themselves and bathe, as elephants, stags, birds, ants. In fact, man may take a lesson in hygiene from the lower animals. Animals get rid of their parasites by using dust, mud, clay, etc. Those suffering from fever restrict their diet, keep quiet, seek dark and airy places, drink water, and sometimes plunge into it. When a dog has lost its appetite it eats that species of grass known as dog's grass (*chien dent*), which acts as an emetic and purgative. Cats also eat grass. Sheep and cows when ill, seek out certain herbs. An animal suffering from chronic rheumatism always keeps as far as possible in the sun. The warrior-ants have regularly organized ambulances. Latreille out the antennae of the ant, and other ants came and covered the wounded part with a transparent fluid secreted from their mouths. If a chimpanzee be wounded,

it stops the bleeding by placing its hand on the wound, or dressing it with leaves and grass. When an animal has a wounded leg or arm hanging on, it completes the amputation by means of its teeth. A dog, on being stung in the muzzle by a viper, was observed to plunge its head repeatedly for several days into running water. This animal eventually recovered. A sporting dog was run over by a carriage. During three weeks in the winter it remained lying in a brook, where its food was taken to it. This animal recovered. A terrier hurt its right eye. It remained lying under a counter, avoiding light and heat, although it habitually kept close to the fire. It adopted a general treatment, rest, and abstinence from food. The local treatment consisted in licking the upper surface of the paw, which it applied to the wounded eye, again licking the paw when it became dry. Animals suffering from traumatic fever treat themselves by the continued application of cold, which Mr. Delaunay considers to be more certain than any of the other methods. In view of these interesting facts, we are, he thinks,

forced to admit that hygiene and therapeutics, as practised by animals, may, in the interest of psychology, be studied with advantage. He could go even further, and say that veterinary medicine, and perhaps human medicine, could gather from them useful indications, precisely because they are prompted by instinct, which are efficacious in the preservation or restoration of health.—*The Veterinary Journal (London)*.

## COOKED FOOD FOR POULTRY.

The practice of furnishing at least one meal of cooked grain and vegetables to fowls daily, is now much more generally in vogue in this country among fanciers and breeders than it formerly was.

If this plan has not been customary throughout the year, as a rule, with any of our readers, then we especially commend it at the present season, and through the winter and spring months, as the very best that can be devised.

Such food is more nourishing, and is more easily digested. It is more palatable and desirable to the birds. And in every way we deem this the better mode, as we have frequently stated in these pages.

It is best, and usually most convenient to the poulterer, to furnish this meal in the morning. If fed warm—during the frigid months, from December to April—it will be still more acceptable to the birds. Especially the meat you give your fowls should be cooked always. Raw meat is too crude, it makes them quarrelsome, and causes illness, frequently. Cooked meat goes further, is more nourishing, and less injurious if over-fed than in the raw state.

For young fowls, very little is needed at a time; and either old or young birds, when kept in confinement, should not be stuffed with this kind of allowance. A large share of their feed should be grains and cooked vegetables. For growing fowls of any age, this is the best staple food, when properly varied.—*Exchange*.

NEVER breed from late turkeys, if it is possible to get better. Never breed from yearling turkeys, if you can get two-year-olds.

## THE DAIRY.

FOR THE RURAL CANADIAN.

### CREAMERY VS. DAIRY.

With farmers and their wives it is a debatable question if it is more profitable to patronize the creamery or make the butter at home, and we fear that the majority in many localities will still decide in favour of the old, time honoured method, not so much because they are convinced that it is the better plan, but because they are the most conservative of old customs and dread anything in the shape of novelty, as an infringement on their sacred rights, and will quote the deeds of their grandmothers as such patterns of perfection in dairy operations that to depart from the foot prints of those venerated matrons is little short of sacrilege.

We must not be too hasty in blaming them for this attachment to old methods which served a good purpose in bygone days, but, though the grandmother made butter that graded No. 1 in Limerick, Belfast, Derry, Glasgow, Liverpool or London, we must not forget that those model dairymaids lived and laboured on the other side of the Atlantic, under far different conditions and circumstances than surround us in Ontario. We must not forget that the butter makers of Ireland, Scotland and England had a different climate to ours, that they were at, or within a few hours' drive of, the best butter market in the world where a prime article is prized, and where the commodity is never purchased by chance, but is subjected to the most careful professional inspection, and placed at once on the consumer's table. We must also take into account the difference in the plans of marketing there and here, when we will easily understand why the private dairy is a success in the Old Country, and a failure in Canada. We must not be understood to say that all the butter made in Britain is of first quality. Second, third, and unbrandable butter sometimes appears on their markets, but never can rank with No. 1, and, as even butter makers must have quality branded on the package, there is no mistaking the negligent or unskilful butter maker as every firkin is unhooped, if unsatisfactory, by the augur test and publicly turned out in the market place. An inferior article cannot be sold but must pay its share of inspection fee and be taken home by the owner, and never again can appear in that market.

#### PACKAGES.

The plan of packing, though not so convenient as ours, is better adapted to exclude contact with outside foreign odours as, instead of the loose-covered Welsh tubs, they pack in double-headed well-hooped firkins, well soaked in brine; so that the Irish butter put up in this style is perfectly safe from any outside influence, and may be carried round our planet without coming in contact with any contaminating influence until the firkin is opened. Another advantage our transatlantic friends have is that they live among the consumers, and they put their butter on the market immediately which we cannot do; theirs never goes into the country storekeeper's cellar to get spiced with the odours of coal oil, stale vegetables, and the multitudinous class of seeds of ferments so prevalent in cellars.

#### WHAT WE CANNOT DO.

We cannot put our dairy butter on the table of the English epicure without the intervention of the storekeeper, butter merchant, and perhaps two or three commission merchants who have no interest in the matter except their own profits. It is clear that we are not in a position to make a good article of butter in the private dairy and get it immediately on the English market, and, suppose a few should succeed, the chances are

that they would be associated with store packed stuff that will ruin the reputation of the whole lot. The only sure way is to patronize the creamery where the whole product will be uniform, superior, and will stand on its own merits and cannot be injured by bad company.

It must not be inferred from the foregoing that a farmer's wife or daughter cannot make as prime an article of butter as is made in the creamery, when the proper appliances, such as the Cooley or Cherry creamer are used, and churning is done at the proper temperature, and carefully and slowly. Under good management the private dairy should make, and often does make, a better article for home consumption, but, under our present circumstances, such butter cannot bring its true value outside the neighbouring town or village and in limited quantities. S. D. G.

May 15, 1885.

### A STEP IN THE RIGHT DIRECTION.

MR. EDITOR.—I am happy to be able to tell all your readers that Mr. John Hannah has got the Seaforth cheese factory, and converted it into a model creamery on an improved plan, the general details of which are as follow: Each patron skims her own cream and keeps it for two days when the hauler takes four skimmings at once. The cream is measured in a pail which the hauler has for the purpose. An inch on the pail is supposed to represent one pound of butter. Half-an-inch of each patron's cream is put into a small self-sealing tin canister, taken to the factory, and placed in a rocking frame, capable of holding about two dozen such canisters, where it is churned, the butter taken off and carefully weighed and the butter yield of each patron's cream scaled by it. This is the only way to come at correct results and do justice to all as cream differs both in quantity and quality of butter production where so many breeds of cows and modes of feeding prevail in a section of country. Tests so far give the very wide margin of from six to ten ounces to the half-inch. Of course, some of this difference may arise from some skimming carefully and others taking more milk with the cream, though very much will depend on the quality of the cream; be these as they may when the skimming is always done by the same person, and in the same way, there is a certainty of each getting credit for what her cream is worth, since there is no chance of anyone knowing beforehand when the test will be made, whether twice a week or every time that cream is hauled. The plan is good and must work well and if followed through a few seasons, must result in satisfaction to all concerned, and tend to enhance the value of good butter producing stock, as quality will soon become an important item in the calculation. There is no better natural grass in America than in Huron, and all we need is the proper animal machine to convert it into gilt-edged butter. Jersey and Canadian grades are bound to come to the front. M. McGRATH.

Egmondville, 1st June, 1885.

### HOW TO RECOGNIZE A TWENTY-QUART COW.

When she is only six weeks old it is hard to tell, and yet I think not so very difficult to do. I do not know that I can tell how. I like a thrifty calf, with a good sized head, which is narrow and long, broad in the muzzle, and between the eyes, and narrow between the horns. I do not care if the limbs are "strong" as they say in Jersey, and perhaps coarse, but they must be straight, and the tail may be even quite coarse at its setting this indicates constitution. Then, from the withers to the hips there should be a straight up-

ward slope, so marked that if you see the front half of the calf, you will think she is a small one, while if you see only the hind-quarters and loins, you will think her very large. In fact, in point of symmetry, the front and hind-quarters ought not to match, and the latter should be by far the larger. I prefer long-bodied, open-ribbed, flat sided, deep bodied calves. The skin should be loose and flexible all over the body, so that one can grasp a handful almost anywhere. The coat must either be long and silky, a little rough, perhaps, but not harsh, or it should be soft and furry. With all this you should find the teats of good size, well spread, and all the skin about them, before and behind that which will cover the udder loose, soft and elastic, showing as the Scotch say "pity of leather." Such a calf will make a good milker if she is bred at a year or fifteen months old, and after her first calf goes farrow (but not long dry), for a year, or nearly that time, to give her a chance to grow. I say nothing about the escutcheon, because I do not know very much about it, and do not believe in half that is said and written about it. Still I must say I would prefer a good, broad, well-winged escutcheon, of the Flandrine type, for if the escutcheon shows anything, it indicates staying power, which is, perhaps the greatest merit a cow can have. Many a twelve or fourteen-quart cow will beat a twenty-quart one in the long run, especially in her butter record—a true test of a cow's value.—*Dakota Farmer.*

### BUTTER DISCRIMINATION.

In a recent number of the *Ohio Farmer* the following article on discriminating in the price of butter, making the quality the basis, appeared and is worthy of the attention of all dairymen and butter makers: "Much has been said from time to time about making and packing butter. I never tried packing much; did not have good luck with what I did try. What I would like to see is better prices for good butter, and not so much for poor. I don't see why merchants don't grade it. If they did we would have a better article. There is not much to encourage a woman to make a nice, solid roll of good, sweet, yellow butter to sell, when another woman comes along with a lot of poor white stuff that hardly holds together, and gets just as much for it as if it was a No. 1 article. It makes one say: 'I don't get pay for my extra work, so I will not try.' One merchant hates to start out for fear of losing custom. Let them all grade it. Sensible women will be satisfied with a fair price. We know when our butter is poor as well as the merchant. We don't pay the same price for all kinds of sugar, nor should we expect the same for all kinds of butter. When we get it ready, send it to market while it is good and fresh, and not keep it until it is so strong that nobody wants it. I know of some that put down butter when it was ten cents and kept it until they got eighteen cents. I happened to get some of it. That is not doing as we would like to be done by."

### FEEDING COWS WHILE AT PASTURE.

It will soon be time for the old question to recur to the dairyman whether or not it pays to feed meal to the cows that are living on good flush pasture. While it is a fact that taken alone there is no better food for a cow than good pasture, yet the experience of many of our best dairymen throughout the country is in favour of quite a liberal feeding with corn-meal and bran even while the cow is on the best of pasture and apparently doing as well as could reasonably be expected of her. It has been found that while green grass furnishes the finest of flavours and deepest of



colours to the milk, that a moderate supply of corn-meal to the cow will put into the milk. It also helps to enlarge the flow of milk, even though the cow has apparently been doing her best. When the cow has been living on grass alone, if she is suddenly given a heavy feed of meal while at pasture she is very apt to slacken up in her supply of milk, and the new experimenter immediately comes to the conclusion that meal may do for other people's cows while at pasture, but his cow does better without it. The fact generally is that the violent change has disarranged the cow's digestion, which naturally stops the flow of milk. There is a right and a wrong way to do everything, and the right way to feed a cow with meal not only while she is at pasture but at any time, is to begin moderately and increase the quantity gradually so that the cow can assimilate her digestive organs to the demand that is made upon them. The fact may be observed if the meal is suddenly taken away from her, only to a more marked degree.

#### A FEW GOOD HINTS.

It seems our American cousins have still a good deal to learn about butter making. The same may be said of worthy people nearer home. It is quite possible that a few readers of THE RURAL CANADIAN may not be too wise to take a hint from the following. The *Iota Homestead* says: "Notwithstanding all that has been written in agricultural papers on the subject of butter-making, farmers and their wives will insist on retaining the dash churn, and thus giving themselves extra trouble, and damaging the quality of butter. Once more we say, fire out every kind and quality of churn that has dasher or paddle, or anything inside. Use a box or barrel churn only. Use a thermometer, and learn by experience to use it right. Don't let your cream get too old. Churn until the butter begins to come, about thirty-five minutes if you have everything right, and then put in cold water to reduce the temperature, then turn very slowly until the butter gathers. Then run off the buttermilk and wash your butter in the churn. It should not be in a great mass, but in granules, like mustard seed or small wheat grains. After you have thus washed it take it out on a lever butter-worker, and salt to suit your taste, and put away without further working, in a cool, clean place till you are ready to market it. Then work enough to incorporate the salt evenly, without any streaks, and no more. By doing this you will be able to command full prices and save yourself lots of grief and mortification."

#### WEED OUT THE POOR COWS.

Weeds are unprofitable plants, says the *American Rural Home*. We might say that they are worthless plants, but that would not be strictly correct for they have some value, but not sufficient to make them profitable to grow as crops. Growing in a crop of good plants such as wheat, oats, barley, beans, etc., they may so displace, crowd out, suppress good plants, robbing them of their necessary aliment as to render the crop a loss to the farmer.

When we say weed out the dairies, we mean to say that in nearly every dairy there are some cows that are unprofitable, that do not give enough milk, or make enough butter or cheese (whatever the object of the dairy), to pay cost of keeping and care, or, if they barely pay cost, they displace others that would pay a good profit. A grain growing farmer who would see so many thin or barren spots in his fields of grain as to reduce the average yield below cost of production would not be satisfied, even though some of the acres yielded large enough to pay a good profit. He would

try, by heavy manuring, more thorough tillage, or by draining, to bring up the yield of the poorer spots to a profitable standard.

A dairyman may easily sink the profits of his herd by keeping a few poor cows. Part of the herd may give enough milk, or make enough butter or cheese to afford a fair profit over cost—feed, care, interest and wear, and yet the business be a losing one, because the other portion of the herd do not pay their way. Dairymen should not be content with a knowledge of what the herd is doing, even though it may be returning a profit, but should know just what every cow is doing. Every cow's milk should be set and tested separately at least twice in the season, when in full milk, and when she has been in milk six or eight months. If any are found doing less than the average, they should be prepared for the shambles, and the feed, labour and care bestowed upon them given to those that would yield above the average. By such means the average would be continually increasing.

Some dairymen have named 200 pounds a year as the minimum yield of butter that should be tolerated in a dairy cow, but that is pretty low, and no dairyman can afford to retain a cow making so small a quantity, if reasonable effort will create a herd, every one of which shall do considerably better. It is because so many farmers are satisfied with doing only tolerably well, do not determine to do the best possible, that so much complaint is made of the unprofitableness of farming.

#### PRACTICAL SUGGESTIONS.

The following is an extract from an address delivered by Mr. F. H. McCrea, a successful dairy farmer near Brockville, Ontario, at the late Huntington Convention:

Looking over the factory books and seeing patrons vary all the way from \$12 to \$60 per cow, I ask why this should be so. The \$60 patron has his cows come in during March and milks them till December. He watches the clock when to go and milk and in driving lets the cows walk leisurely. The \$12 patron lets his cows in winter stand up to the knees in snow, while he is away in the bush, trying to make out the living he might earn by attending better to his dairy. One morning he milks at five, another morning he is away, and his wife milks at nine or ten, and another his children do so at all hours. Half the time the cows are without water, and in the fall when the patron sees they have not paid, he looks around for another factory that will manufacture cheese cheaper. (Laughter.) My cows yield an average of 6,000 pounds of milk a season, and I hope to raise them to 8,000, and am encouraged to think even better results possible, when I read of a Holstein having given 28,000 pounds.

With regard to ventilation I prefer the air to come in at the front of the head, where it is most needed; remove the breath, and not to strike the body.

I feed peameal mixed with bran; it gives me the best satisfaction aside from unthreshed oats. I feed my cows only what they will eat up clean. I have experimented, feeding cows in one stable four times a day, and in the other twice, and found the latter come out best, with sleek hair, while that of the others was dry and sticking up.

The cow is a creature of habit and can be accustomed to feeding twice. In cold weather they get their feed dry; and in warm I wet it twenty-four hours ahead.

We know of no agricultural journal more thoroughly practical, and better suited for the Canadian farmer than THE RURAL CANADIAN.—*Tandah Herald.*

#### CREAM.

The "one more" drink has made a hundred thousand drunkards.

The lad was blowing bubbles when he accidentally swallowed some of the soapsuds, and that made him ill.

A NEW SONG is entitled "Between the Green Corn and the Gold." It should be sung in a husky voice.

A cow is a strange creature. Although it may not always have enough to eat, it always cud eat if it chews.

"Are you sure you are converted?" asked Mr. Sprurgeon of a devout housemaid. "Deed, sir, I think I am, for I sweep under the beds, and in dark corners."

"Have you corns?" blandly asked the corn plaster peddler at the busy man's elbow. "Yes; I am supplied," answered the busy man without looking up.

"You seem to have plenty of business here," said a drummer to Miss Fitz, the dressmaker. "There's a heap more bustle than business," was the lady's reply.

A MISSOURI man tried to ride a mule across a creek thirty feet deep. The man was drowned; but the mule crossed in safety, walking on the bottom and breathing through his ears.

It is a pitiable sight to see a woman who, but one short week ago, possessed an angel's sweetness of disposition and a child's artlessness of character, watching at the head of the stairs, at 2 o'clock in the morning, with a towel-roller in her hand.

A woman, returning from market, got into a South Hill street car the other day, with a basket full of dressed poultry. To her the driver, speaking sharply, said: "Fare!" "No," said the woman, "Fowl!" And everybody cackled.

"No, ma'am!" exclaimed the provoked young man to a young lady, who, on the refusal of her favourite, had asked him to accompany her to a party; I don't play second fiddle to any one." "No one asked you to play second fiddle," replied the girl with a smile; "I only asked you to be my beau."

"Pa, does the sausage come out of its hole on Candlemas day, and look around for its shadow, so as to make an early spring? Ma says it does." "What are you talking about?" says the papa to the little boy. "It is the ground-hog that comes out of its hole, not the sausage." "Well, ain't sausage ground hog?"

"I PROTEST!" exclaimed the new jour. barber, as the gentleman from the Emerald Isle dropped into the operating chair; "I draw the line right here. I'm willing to mix lather, but hang me if I'll lather Micks." It was feared that the Hibernian would razor row then and there, and whisker around a shillelah, perhaps; but as the jour. barber was a strapping fellow the exile from Erin had to hone that the joke was a good one. Let us hope that all quarrels may end before they have begun.

"LEARNING," says a Down-Easter, "is well enough; but is hardly pays to give a five-thousand dollar education to a five-dollar boy." There is a world of good common sense meaning in the above expression. The world has lost many a good mechanic and farmer by attempting to educate a boy into the overcrowded professions for which he is wholly unfitted by nature. A part of education should be to impress upon the mind of the pupil that labour is honourable; that work is not a disgrace; that a man may be a philosopher and yet labour with his hands, and be esteemed far more highly than the accomplished idler.



## GARDEN AND ORCHARD.

FOR THE RURAL CANADIAN:

## WALKS IN THE GARDEN.—VII.

JULY is the month for weeds and he who would reap the reward of his labours for the past two months must keep the cultivator constantly going. Too many gardens are sown with care, and the first growth of weeds plucked out, but afterwards when the scorching July sun makes work a burden, allowed to grow up with all kinds of noxious vegetation, which not only destroys the crop, but scatters their seeds far and wide, and doubles the work for the next year. The corners and out of the way places are too often allowed to run waste, even where the main garden is closely looked after, and a very little space will supply thistle or groundsel seed enough to sow an acre. If any success is to be had in a garden there should be no waste places. Every inch should be made to grow something useful and it will do it, if it is looked after.

I suppose the Canadian thistle is one of the worst weeds we have, but it can be killed out by persistent cutting and never allowing it to seed. Burdocks, too, are bad, but if never allowed to make leaves, the roots will soon die. Groundsel is an annual, but ripens two or three crops of seed in a year, and if not looked after very closely will soon overrun the place. There is a new-comer in our parts, which people call the milk thistle. It is a persistent grower, as a yellow flower, with downy seed which is borne on the wind, and carried to considerable distances. The mallow, too, with its long roots penetrating a foot or more into the ground, is a foe not easily to be conquered; but all of them can be overcome by a vigorous and persistent onslaught, and, believe me, it is worth the trouble.

I HAD a good deal of trouble with the weeds in the gravel walks, which seemed to defy everything, especially an insignificant-looking wire weed, which soon covered the surface, and presented a very untidy appearance. I found salt applied thickly enough to completely cover the surface, a perfect cure, and as cheap as it is easy of application.

APART from the economy of raising several crops on the same ground, which I have spoken of several times—it is one of my hobbies—it is absolutely necessary to keep the ground clean. If the land that peas, spinach, or any of the early vegetables are raised on, is allowed to remain uncultivated when the crops are gathered, the weeds will soon take possession and store up trouble for the gardener against another season.

As a general rule lawns will bear cutting about twice a week and should have that much to keep them looking nice, except when the weather is exceedingly dry, and from all appearances that is not likely to occur this year. The clipped grass should never be removed, but allowed to lie to serve as a mulch.

Don't be afraid to cut your flowers. They bear all the better from having the clusters removed, and not allowed to seed. It is surprising how much longer and stronger the bloom will be if this is attended to.

THERE is considerable difference of opinion about growing tomatoes. My plan has always been to trellis them in one way or another, and to prune moderately. A neighbour of mine, a professional gardener, who is very successful, allows the vines to grow on the ground, placing shingles under the clusters of fruit

to preserve them from the dirt. He prunes excessively, leaving one would hardly think foliage enough to keep the plants alive. The other day I was talking to a market man, one of the largest and most successful tomato growers in this section, and who has originated several valuable varieties, and he told me his practice was to force the vines to spread on the ground, even if the stems had to be split. The knife was never allowed to touch them and the fruit lay on the earth, which he said was several degrees warmer than a shingle, and hastened the ripening. I shall try the three plans, and tell you later about it.

THE tomato rot has bothered us a good deal these few years. The diseased fruit should be removed and buried deep or burned as soon as the rot shows. The big green caterpillars should be destroyed, as they will soon strip off the leaves.

I ALWAYS put bags on open clusters of grapes, that is, when the frost spares any, which it doesn't every year. They are about four by six inches, and are slipped over the bunches and tied, as soon as the fruit is the size of peas. It is often possible to ripen the late varieties in this way, which would otherwise be cut off by the late frosts, which as well as the early ones, render grape culture anything but a sure thing where I live.

THERE isn't a handier thing about the place than a bottle of shellac varnish and a brush. If a tree is wounded in any way a coating of the varnish will close it air-tight in a minute, and prevent any serious injury; where large branches are cut off it will answer the same purpose; when the black knot is cut off plum trees, as it always should be, a coating of varnish will be found very useful.

It is not too late yet to plant corn, peas and beans for use in the fall, but the earliest kinds only must be used. The constant succession of vegetables is one of the pleasures of having a private garden which can never be enjoyed by those depending on a market supply. Green peas and green beans are generally considered out of season in September and afterwards, but those who once grow them for use at that time will always do it, and perhaps thank me for the hint. X.

## THE WHITE GRUB AND MILK-WEED.

MR. EDITOR,—I noticed an article some time ago in one of our Canadian publications as to the best way to get rid of white grubs which were destroying strawberry plants, and it stated that the best thing to do was to dig up the plants which were wilted and try to find the grubs and kill them, that there was no danger of any more grubs getting into the patch until fresh eggs were laid by the June bugs, or something to that effect. It gave the idea that white grubs (such as eat the potatoes while growing) were the same as the big black bugs commonly known as June bugs, only that they were in a different stage of growth. After I read the article I wrote the editor of the *Montreal Witness* and asked for some scientific light to be thrown on the subject, as I doubted the statement, and I am still of the opinion that the common white grub and June bug or beetle are not the same species, from the fact that they can be found at any and all seasons of the year when the ground can be worked, and of all sizes at the same season. I have found them in large numbers in the month of May when they were not larger than a grain of wheat, and again in September, the same way. I shall be pleased to have some one explain it.

I also noticed an article in the same paper

stating that the common milkweed was an annual and that if it was cut down before going to seed that was the end of it. Now, Mr. Editor, I was surprised to see such an article in one of our leading papers, as there are thousands of people in Canada who know better and the person who wrote that the plant known as milk-weed was an annual knew nothing whatever about it, for it is just as hard to destroy it as the Canada thistle, and of the two I would rather undertake to kill the latter. I have seen milk-weeds push through four feet of heavy, fresh soil thrown up from ditching. I have cut the stems off four inches under ground and in ten days half-a-dozen would shoot up from the old one. It is almost impossible to destroy them, a piece of the root buried four feet deep will grow and if left on top of the ground when there is a reasonable amount of moisture it will thrive first rate. However, it is not inclined to spread very rapidly, and as the seed comes to maturity later than most of our grain, there is not much danger from seed. I have known little patches of milk-weed in certain fields for over thirty years and where it is cut annually either with the grain or specially when pastured, and it does not spread much but is very hard to destroy. I believe the best way to get rid of it is to use a spud and go over the ground once a week and just as soon as it appears cut it off four inches below the surface. The same rule may be applied to Canada thistle. Yours truly,

G. E. PERKINS.

Ingersoll, Ont., June 22, 1885.

## ORCHARD PRUNING.

A late English horticulturist says that after trying all sorts of plans, he is thoroughly convinced that there is nothing equal to the little-and-often system of pruning, or rather pinching. The soft young shoots can be readily removed by the finger and thumb, which is the easiest way. To which we may add that any owner who is really interested in his garden will be likely to pass among his trees and shrubs quite often, and if he sees any want or defect, he will at once supply or remove it. With this view a well-known cultivator recently remarked that his season for pruning is all the season through.

SOME time between now and next spring every owner of a plum orchard should insert in the trunk, or if the tree is large, into each main limb, an iron plug to strike on with a heavy hammer for jarring down the curculios. The plugs may be easily and cheaply made by a blacksmith, by chopping up a round iron rod, say three-eighths of an inch diameter and three inches long; and then set in holes bored in the tree an inch or two deep. A blow on one of these plugs will bring down every curculio upon the sheets to be spread under the trees.

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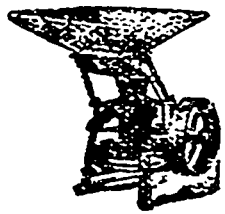


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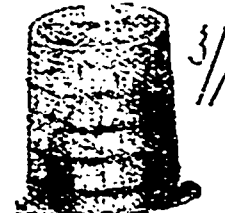


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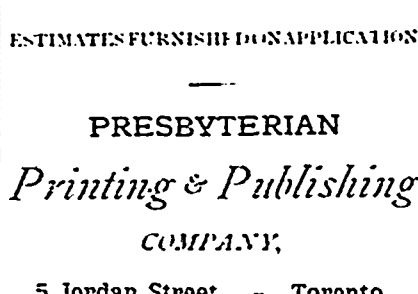
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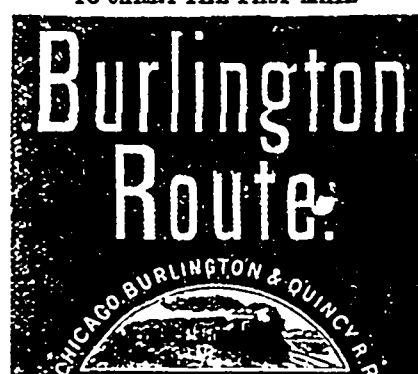
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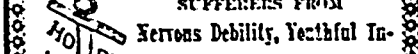
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## The Rural Canadian.

TORONTO, JULY, 1885.

### MODEL DAIRY AT THE TORONTO INDUSTRIAL TRIAL EXHIBITION.

The Directors of the Industrial Exhibition Association of Toronto seem determined to bring before the people of this country all the improvements that are from time to time being made to advance the agricultural interests of the Dominion. They have decided to establish and operate in connection with their next Exhibition, to be held at Toronto from the 7th to the 19th of September, a Model Dairy. It will be under the management and superintendence of Professor Brown, of the Guelph Agricultural College, assisted by Professor Barry, the well known scientist of cheese and butter making. It is proposed to exhibit a centrifugal machine for separating the cream from 300 pounds of milk per day, and making the same into butter. The milk from different breeds of cattle procured daily on the Exhibition Grounds will be exhibited in large glass tubes, so that visitors can see the quantity of cream given by each cow from an equal quantity of milk. Professor Brown and Professor Barry will be on hand at all times during the Exhibition to furnish information to visitors and those interested in cheese and butter making. The dairy will be fitted with all the latest improvements of dairy utensils and should prove of special interest to those interested in this department, and we can safely say that our farmers even if they have to travel a long way to the Toronto Exhibition to see this department, will be amply repaid for their trouble and expense.

### OLEO BUTTERS.

The Court of Appeals of New York State has given a decision that meantime favours the makers of oleomargarine and other imitations of butter.—The sixth section of the Act of 1884 relating to the subject prohibited the manufacture out of oleaginous substances of any compound except that produced from unadulterated milk or cream, designed to take the place of butter. A prosecution took place under the provisions of the Act and a conviction was obtained. Against this conviction the defendant appealed on two grounds: (1) that evidence was given by him to show that oleomargarine was as wholesome as dairy butter, and (2) that the law was an oppressive interference with legitimate trade and was consequently unconstitutional. The Supreme Court of the State confirmed the conviction, but the Court of Appeals has set it aside on the grounds of the unconstitutionality of the sixth section. This has the effect of destroying the Act, and doubtless the oleo-butter trade will become as active as ever. The judgment of the court is doubtless good law, for it is unreasonable to prohibit the manufacture or sale of any article of diet that is not injurious to health. What the Act ought to provide against is the offering for sale of any imitation of butter for the genuine article. This is fraud, and its punishment is perfectly justifiable. But if consumers are satisfied with oleo-butter, and know what they are using, the law ought not to inter-

fere unless it can be shown that the article is hurtful to health. It is no doubt the fact that the reputation of American butter has suffered in consequence of oleomargarine and butterine being sold for real butter, but so long as there is no deception in the trade we do not think that Legislatures have any right to interfere.

### THE RISK OF LEAF-PRUNING.

An impression prevails with novices in fruit-growing, and with some who do not regard themselves as novices, that the quality of fruit may be improved and its early ripening hastened by stripping the trees of a portion of their leaves. This is a serious mistake, as any one who considers what the functions of leaves are will readily understand. They are the lungs of plants, and it is largely through leaves that plants receive their nutriment. Strip a fruit-laden tree of any portion of its foliage and you cut off one of the main sources of supply of food for the growing fruit. Not only so, but the fruit draws on the store of substance and vitality laid up in the tree, and thereby may be the cause of its ruin. Any one who has noticed the effect produced on fruit when the leaves of a tree or bush are eaten off by worms does not need to be reminded of the risk of leaf-pruning. Growth ceases, there is a want of flavour, and immaturity generally. And what is true of the effect caused by stripping a tree of its foliage is equally true of summer pruning, unless it be done on a very moderate scale. It is possible that by pinching off the extremities of twigs more plant-food goes to nourish the fruit, but the experiment is one that should be made with great caution. The best pruning is that which is done before the leaf buds unfold in early spring, and before the sap has begun to flow.

### PERMANENT PASTURES.

It is scarcely necessary for us to go into the primer of agricultural work for the information of Canadian farmers as to the requisite conditions for putting a tract of land into grass. We shall take it for granted that it is understood that the area provided for the purpose has been prepared with the ordinary care; that a course of preparatory cropping has left the land perfectly clean; that it is in good tilth, and possesses all the conditions of fertility, either naturally or by application. Much will depend upon the character of the soil to determine what the character of the seed may be which it is to carry, as well as what the character of the cereal may be which is to cover the first growth and come first from the land. In all cases no seeding should be laid on which does not contain a large admixture of timothy and clover. They are plants of an exceedingly opposite character, and derive their nutriment and vigour from almost extremely opposite sources; the exhaustive character of one of them being appropriately neutralized by the fertilizing and otherwise efficacious work of the other. Independently of the fact, too, that the two plants succeed each other in coming into bloom, which is a valuable condition as regards a permanent grip on the soil, by consecutive deposition of at least an appreciable quantity of seed; one of them, the clover plant, whilst it sends its vigorous rootlets deep into the ground, depends for the most part on atmospheric nourishment for support of its luscious herbage. No better cereal than oats can be deposited with the grass seeds, whether for grain or fodder; but better still if applied in the lesser quantity requisite for conversion into grain. And no more cheering or satisfactory spectacle in this line can greet the eye of an intelligent farmer than the magnificent, vigorous, and verdant sward which rewards his toil and care, after

the last sheaf of oats has been removed from the ground.

He has now before him the nucleus of what may be designated as a permanent pasture—if any production of the kind may be so called—if only care is taken in keeping his seed and his soil up to its work. And here there are very special conditions to be observed if success is desirable. We presume—notwithstanding the fact that we are treating of permanent pasture—that something more than this, however, is requisite; and that the area is to produce a certain tonnage of winter feed, as well as an early autumn and fall pasture. Here, then, something is to be yielded, if both conditions are to be gained. Ordinarily, the best and proper time to put the knife to the grass is when the latter is just in bloom, when the leaves and stem of the plant are filled with nutritious juice, that is, always provided nothing further is required of the land than the special crop of hay which it carries. If pasture, and especially permanency of pasture, however, is equally requisite, it will be better to allow the bloom to disappear before cutting, and to give the seed ears a considerable amount of solidity, even at the expense of producing a little woody fibre in the plants. In this latter case the unequal ripening of the seed pods, which is always inevitable, will, after the crop is properly cut, cured and removed from the land, leave behind it a very considerable deposit of seed which will do its work faithfully, especially if subjected later on in the season to even the lightest quantity of top-dressing, although the latter process is not at all necessarily essential. In the meantime, however, and under any circumstances, no use of the land should be made for pasture purposes the first year for very obvious reasons; no sufficient sod being as yet made, no matter how luxurious the aftermath may become, to resist the teeth as well as the hoofs of the impatient invader. Nor at any time during subsequent seasons, even after the sod is well and firmly established, should cattle be placed upon the land, until after one or more heavy rain showers have well bedded the deposited seed.

If, however, the farmer will persist in cutting his grass in its best condition, and before any of it has arrived at sufficient maturity to shed somewhat of its seed, an excellent method is that of running a pair of well-weighted harrows over the ground, and following this scratching process by a few pounds of mixed seeds as before. A fair top dressing, followed after a few days by an application of the roller; or a little bushing-in, without the top-dressing, followed by the roller, will do all that is ordinarily needed, and all that can possibly be done in providing a permanent pasture as it is possible to arrive at or to maintain.

FOR THE RURAL CANADIAN.

### FLAT CULTIVATION.

For most hoed and root crops, flat cultivation is preferable to hilling or high drilling, in either a very dry or wet season, provided the drill harrow be freely used and often. Corn will not do nearly so well if hilled, as its roots delight to spread in surface soil, and where much hilled up the cultivator is sure to break the roots and summer winds are apt to break it over or partially turn it out. To overcome this, we tried an experiment that gave entire satisfaction, by opening shallow drills from north to south, dropping the seed in the space between the drills and drawing the harrow lengthwise of the drills, which gave a nice light covering and left plenty of soil between the rows for summer cultivation; the crop stood well and the roots had good covering without coming near the subsoil. When hilled up, the roots soon run out into shallower soil and are



sure to get injured or cut off by the scuffler. For our climate at least, drills are preferable to hills, will yield more to the acre, and when run in the right direction get enough sunlight, an absolute necessity to secure a full crop.

POTATOES.

Two seasons have almost convinced me that flat cultivation is better for potatoes than the hilling plan, though care must be taken to have sufficient depth to cover the tubers when full grown. A tolerably common practice, and not a bad one, where the land is rich, fine and in good condition, is to drop the seed in every third furrow when ploughing the land the last time. Our way is to give the finest ground to spring wheat and leave our weediest and poorest piece for roots, give it a thorough coating of fresh manure and work the life out of the weeds. We plough in the fall, again in the spring when the ground will work well, harrow fine, roll if there is time and let lie till spring grains have been sown; then, as soon as the land gets dry and warm, say from the last of May till the tenth of June, gang plough, harrow, roll and open the drill as straight and shallow as can be done with a common plough, cut the seed, if large, to one eye, if medium to two, and if small split in two and drop three drills at a time and cover the seed with manure; if well fermented more may be used, but if unfermented a little less. We can pitch manure in three drills at a time from the waggon and not have to drive over the seed. The drills are then covered as high as possible from both sides with the plough, and when the first tops are nearly peeping through, say in about two weeks, put on a light diamond or wooden harrow and harrow down fine and level. We scuffle often if weather keeps warm until the tops get too large to get through and make no effort to mould up. Last season we got perhaps the best crop that has ever been grown on the place and of a very uniform large size and very few small ones, and the ground was entirely freed from weeds. Whether it would work so well in a very wet season remains to be tried; but potatoes are sure to be a failure on clay land in a wet season, whatever the mode of culture. It will be worth while for farmers to try flat cultivation, if not on the whole at least on a part of their potato land, and compare. If the surface be kept well stirred until the time of blossoming, there is not much danger of potatoes being sunburnt or the bugs doing much harm, as the growth will be very rapid.

S. D. G.

FOR THE RURAL CANADIAN.

FENCE POSTS.

As onward we journey,  
Through life's rugged way,  
We find something to learn  
And something to say.

What I have learned may not be new or useful to the majority of THE RURAL CANADIAN readers; but should it interest and benefit only a small minority, the labour will be well spent, as professors only can teach, and he who would instruct the farmer in his every-day work must be more than a mere theorist. Theory is good but practice is the demonstration and conclusion of theory. Practice rests on correct theory which is based on natural laws that cannot err.

Since the fencing timber becomes more scarce from year to year, the old worm fence must be replaced by post fences of some description, either posts and rails, posts and boards, or posts and wire. No matter which description, our remarks will apply where wooden posts are used. The common plan of setting in fence posts, in my opinion and experience, is defective and might very easily be improved.

The ordinary way is to use large posts cut square in the ends and set in three to three and

a-half feet deep, but end down. Such a fence stands all right till the first spring, when, if the soil holds water and freezes, it will be found that the winter's frost has lifted the posts from four to ten inches, according to the number of times the ground has frozen and thawed during the winter and spring. The next winter will be apt to give an additional lift until, after a few years, the posts are nearly out of the ground. Some have an idea that large posts heave out less than small ones. A little reasoning will dispel this idea. We know that frost lifts not only large rocks, but even stone walls of buildings, so that though the large post has more surface to press on the soil to hold it steadily, it has more surface to be caught by the frost than a smaller one, and is more difficult to get replaced. Let us examine how the agencies operate. As the wet soil freezes the soil takes a firm hold of the post, and the water being converted into ice raises the surface and the post with it; when a thaw comes the soil against the post thaws first, and the finer parts are washed down along the post and settle in the bottom of the hole. This operation goes on with each frost and thaw till the space below the post becomes filled with finely compacted soil that prevents the post from getting down again. No amount of driving can force the flat end of a post down to where it was first set, when the bottom of the hole has been filled with fine clay or sand. Some of the best set posts in Huron, after a few years, are now nearly out of the ground. To prevent, or counteract this difficulty we use smaller posts nicely and evenly pointed and with a sledge or maul drive them as far as possible into the bottom of the hole, then fill and pack. The advantage to be gained is that when the post is lifted only a small space is vacant at the bottom of the post which, being sharp in the point, sinks of its own weight almost back to its original depth; but should it not settle low enough after two or three seasons, a man with a sledge, before the ground gets solid in spring, can go over a long stretch of fence and drive the posts home. A pointed post holds in the ground firmer than a square-ended one, as has been observed by the first fence that was built along the railway, where some posts were driven and others dug.

To prevent posts from rotting or becoming wormy near or in the ground a simple and cheap remedy is to bore a half or three-eighth inch hole two-thirds through the post about six inches above the ground, slanting downward, and fill it with coal oil and plug it up. The oil will soak thoroughly into the wood and keeps worms from getting into it. The rotting of all timber is caused by animals eating the woody tissue, and the little pests dislike to have their food spiced with coal oil.

S. D. G.

CANADA SHORTHORN HERD-BOOK.

Below we give a list of transfers of thoroughbreds reported from April 20 to May 20, 1885. In the following list the person first named is the seller and the second the buyer:

- B. But [12857], by Baron Mansfield, 31722, Wm. T. Loomis, Georgia, Vt.; J. A. Chamberlain & Son, Grand Isle, Vt.
- B. Christopher [12856], by Frank, 29574, M. D. Walker, St. Alban's Bay, Vt.; J. A. Chamberlain & Son, Grand Isle, Vt.
- C. Lizzie [14671], by Duke of Sharon 10th [9301], James Brown, Galt; M. Audinch, Galt
- B. Pride of Stephen [12859], by Duke of Sharon 10th [9301], James Brown, Galt; Ed. Doaderich, Dashwood
- B. Royal Duke (Twin), 12858, by Duke of Sharon 10th [9301], James Brown, Galt; James & John Robertson, Strabur.
- C. Maid [14673], by Duke of Sharon 10th [9301], J. Wm. Fraser, Ayr; John Rutherford, Galt.
- B. Samson [12865], by Major Bampton [10204], Thomas Parker, Ivy; J. R. Parker, Minesing.
- B. Bismarck [12866], by Young Waraby [12423], James Hammond, Hammond; George Ament, Gowaston.
- C. Briney [14677], by Seraph 2nd [7840], Joseph L. Zehr, Tavistock; C. Christnor, New Hamburg.
- B. Red Duke 3rd [12872], by Duke of Oxford [6961], Joseph L. Zehr, Tavistock; O. Leitchy, Walleley.

- B. Young Star [12870], by Young Airdrie Duke [10625], Noah Crossman, New Hamburg; C. Klink, Brunner.
- B. Prince George [12869], by Stockwell Chief [12868], J. B. Clemens, Preston; H. Weicker, New Hamburg.
- B. Stockwell Chief [12868], by Pilot [5851], John & James Howlet, Elmira; Isaac B. Clemens, Preston.
- C. Maggie Dale [14681], by Brideman 6th [4673] J. W. Marshall, London; Joseph Imeson, Goldsmith.
- B. Duke Dalton [12875], by Briteman 6th [4673], Joseph Imeson, Goldsmith; Joseph Dales, Wheatley.
- C. Lady Lansdowns [11674], by Sir Frederick Roberts [7862], Joseph Beatty, Perth; J. Beatty, Perth.
- B. Duke of Concord [12867], by Eglington [8524], Joseph E. Sheppard, Newtonbrook; A. Howe, Concord.
- B. Dominion Prince [12878], by Crusade [6797], Alex. Linton, Ayr; James Sunson, Jamestown.
- B. Baron Heir 4th [12881], by Baron Gwynneth 3rd [6605], Bilton Snarey, Croton; John Sowler & S. Moyer, Cashmere.
- B. Lord of Lorne [12891], by Don Anselmo [8326], John Cairns, Hillsboro; Allen Gray, Camlachie.
- B. General Gordon [12882], by The Cavalier [7944], John Glen, Lumley; Wm. Glen, Hensall.
- C. Wellesley Belle [11689], by Billy of Millbank [12037], M. A. McCormick, Millbank; F. Berdux, Wellesley.
- B. Walpole Chief [12884], by Pedro [11895], Walter Jones, Garnet; D. H. Baldwin, Atchison, Kas.
- B. Prince Arthur [12886], by Sir Leonard (imp.) [10500], Charles W. Kelly, Guelph; Joseph Powley, Struton.
- B. Vermont 2nd (imp.) [12888], by Vermont [47193], S. C. Isaac, Baltimore; Wm. Collins, Peterboro.
- B. Earl of McMillivray [12889], by Dauncan [9335] C. A. Paul, Coldstream; Peter McEwan, Ailsa Craig.
- B. Joe of Elora [12890], by Sultan [10981], W. L. Gordon, Elora; V. Saefer, Pentland.
- B. Roderick Dhu [12891], by Darnpton Hero [6595], Robert Fasken, Elora; John Burnett, Salein.
- B. Alvin [12893], by Aquilla [12759], James Rea, Mimosa; Wm. Rea, Mimosa.
- B. Duke of Glencell [12894], by Hanlan [8678], H. A. Switzer, Woodham; A. W. Marritt Ailsa Craig.
- B. Bob Roy [12895], by Mason [10227], Robert Walker, Carluke; John Walker, Woodstock.
- B. Captain Jack Addie [12898], by Mason [10227] Robert Walker, Carluke; George Shaver, Ancaster.
- B. Louis 2nd [12902], by Louis [8320], late Wm. McCullough, St. Mary's; Robert McCullough, St. Mary's.
- B. President [12699], by Bampton Hero [6595], J. & W. Watt, Salein; Alex. Smith, St. Mary's.
- B. President 2nd [12900], by President [12899], late Wm. McCullough, St. Mary's; Robert McCullough.
- H. Pearlletie Butterfly 5th [11699], by Louis 2nd [12502], late Wm. McCullough, St. Mary's; Robert McCullough, St. Mary's.
- C. Emily 3rd [14700], by Viscount (imp.) [4197], Jos. E. Gould, Oshawa; E. E. Cooper, Oshawa.
- B. Sir Hector [12904], by Scarlet Velvet [7833], E. E. Cooper, Oshawa; Samuel Staples, Oshawa.
- B. Sarmiso [12907], by Baron Sarmiso (imp.) [12494], H. H. Spencer, Brooklin; E. F. Sutton, Ida.
- B. Wales Arthur [12903], by Prince Arthur [9120], John B. Schmidt, Lisbon; Henry K. Schmidt, Lisbon.
- C. Princess Empire [14707], by Young Empire [11628], John Gainer & Son, Welland; John Rock, Springfield.
- B. Welland Champion [12915], by Young Empire [11529], John Gainer & Son, Welland; John Rock, Springfield.
- B. Empire 2nd [12913], by Young Empire [11825], John Gainer & Son, Welland; Jacob Steinman, Ridgeway.
- B. Collingwood Chief [12919], by Whitevale Chief [12974], Alex. Waidell, Claremont; Robert Anderson, Thornbury.
- B. Cedric The Saxon 2nd [12923], by Cedric The Saxon [11379], And. Jamieson, Londesboro; Wm. Isbester, Wingham.
- B. Prince Consort [12928], by 16th Seraph [10999], James G. Pettit & Son, Burgessville; Charles H. Leicester, Courtland.
- C. Lady Helen [14715], by 16th Seraph [10999], James G. Pettit & Son, Burgessville; Charles H. Leicester, Courtland.
- B. Richard 1st [12924], by Clifford [9768], F. B. Anderson, Fergus; James Powers, North Keppel.
- C. Elma Queen [14713], by Earl of Airdrie 2nd [5158], A. Anderson, Barns; Robert Ford, Hammond.
- B. Lincoln Chief [12925], by Sir Garnett [11768], Wm. Ash, Thorold; J. W. Springstead, Abingdon.
- B. Duke of Argyll [12930], by Crown Prince [12931], John Hislop, Brussels; David Campbell, Walton.
- B. Crown Prince [12931], by Earl of Airdrie [5159], George Thompson, Alton; John Hislop, Brussels.
- B. Lord Meigund [12934], by Best Plate [8164], John Johnston, Hillsdale; James Johnstone, Oro.
- B. Duke of Wellington [12936], by 2nd Duke of Pickering [8456], Wm. Major & Sons, Whitvale; D. McLaren, Douglas.
- B. Farmer's Pride [12937], by Osborne [11491], John Douglas, Tara; Henry Crow, Dunblane.
- B. Cleveland [12938], by Osborne [11491], John Douglas, Tara; A. W. Dalgarno, Peabody.

A FRUIT-GROWER placed tobacco stems around the trunks of peach trees, and there is not the sign of a borer. He set the stems around the butts of the trees and tied them at the tops. It keeps off rabbits, as well, in winter.

THE fashionable jacket for young girls is made with a loose front and tight-fitting back. Jersey jackets that fit the figure closely, trimmed across the front with gold braid, and cutaway jackets of the same length of the basque are also popular.



## Bees and Honey.



### OFFICERS OF ONTARIO BEE-KEEPERS' ASSOCIATION, 1885.

President, Dr. Thom, Streetville; 1st Vice-President, S. T. Petit, Belmont; 2nd Vice-President R. McKnight, Owen Sound; Secy., Treas. Jacob Spence, Toronto.

EXECUTIVE COMMITTEE—D. A. Jones, Beeton; Wm. Campbell, Cayuga; S. Webster, Doncaster; F. H. McPherson, Beeton; P. C. Dempsey, Trenton.

Communications on the business of the Association, and Bee-Keepers' Department of the Canadian Farmer to be addressed to the Secretary-Treasurer, 251 Parliament St., Toronto.

### THE DUTY ON BEESWAX.

BY S. CORNEIL, LINDSAY, ONTARIO.

It will be recollected that the Ontario Bee-Keepers' Association last fall appointed a committee, consisting of Dr. Ferguson, M. P., Mr. P. C. Dempsey and myself, for the purpose of having the duty taken off beeswax. Some time before the opening of the present session of Parliament, Mr. Dempsey and I placed in Dr. Ferguson's hands a statement of the reasons for asking for the removal of the duty, and we requested him to lay the matter before the Minister of Finance and induce him if possible to place beeswax on the freelist. I also asked Mr. J. R. Dundas, M. P. for South Victoria, to interest himself in the matter, and soon after the opening of the House he wrote me that Dr. Ferguson and he thought a deputation of bee-keepers should be sent down to discuss the whole question, because some supply dealers had requested not only to have the duty taken off wax; but to have a duty placed on comb foundation. I corresponded with Dr. Thomas, the president of the Ontario Bee-Keepers' Association, but as there were no funds available for the purpose, he thought the Executive Committee would not be warranted in incurring the expense of sending a deputation. In reply, I wrote to Mr. Dundas that as we had facilities for manufacturing all the comb foundation required in the country, it would be satisfactory to the Association if a duty were placed on the manufactured article and the raw material admitted free. Subsequently I received the following, a note from Dr. Ferguson.

House of Commons, May 5th, 1885.

DEAR SIR,—In reply to your post-card on the 4th inst., I may say that I saw the Finance Minister, some time since, with reference to the duty on beeswax and his objection to taking off the duty was that a large quantity of wax is made in the Maritime Provinces, so much indeed that they carry on a considerable export trade in the article.

Under these circumstances, of course, he could not see his way clear to abolish the duty.

Yours truly,

JOHN FERGUSON.

S. Corneil, Lindsay, Ontario.

The fact that beeswax is exported from any part of the Dominion was new to me, and as the Trade and Navigation Returns contain no record of it unless it be included under the head of "Other Agricultural Products Exported" I asked the Minister of Customs to send me a statement showing the quantity and value of beeswax exported and the countries to which it is exported. In reply I received the following note:

S. CORNEIL, Esq., Lindsay.

Ottawa, 16th June, 1885.

DEAR SIR,—I am in receipt of yours of the 18th inst., and regret that I am unable to give you the information for which you asked with reference to the exportation of beeswax. The clerk of the Customs Statistical Branch informs me that some years ago the exports of this article were given in the annual Trade and Navigation Returns but that as the quantity was unimportant the item was dropped from the list of specified goods.

Yours truly,

M. BOWELL.

It so happens that our own supply of wax is sufficient for this season. Before another season comes a round we can probably find out more as to the extent of the supply in the Maritime Provinces. We shall then be in a better position to decide what further action should be taken.

### A PHYSIOLOGICAL ANOMALY.

BY A. J. COOK.

The wings of the queen bee, like those of all bees and most other insects, are four in number; two anterior or primary, and two posterior or secondary, which are smaller than the anterior ones. The anatomical structure of these organs is likewise the same in all insects. A set of double tubes, one within the other, serves as a framework on which is spread the transparent part of the wing. The inner tube carries the aerial food, oxygen, and the outer one serves as the blood conduit. All nourishment, whether from the blood or air tubes, reaches the membrane by the slow process of absorption. Here then, as with our own cartilages and outer skin, nutrition is languid.

The wings are moved by powerful muscles massed in rounded form, very compactly, in the thorax. These muscles are striated, the same as are the voluntary muscles of all higher animals, but they are not surrounded by fascia.

We see, then, that the queen's organs of flight are very similar, structurally and functionally, to the organs of higher animals. Hence we should suppose that any law that held among the latter would be as strictly true of the former. It is a generally recognized truth that any organ or tissue is only strong as it is used. Indolence means atrophy. He who uses his brain but little has but little to use. The sedentary man is always weak, and physically inefficient. The horse that has stood in the barn without any exercise for weeks, is denominated "soft" and is not fit for hard muscular effort.

A horse is lame in the foot. Certain muscles of the shoulder, now in disuse, sink away and the pseudo-veterinarian treats him for the so-called swinney. This is only an atrophy of the muscles, consequent upon disuse, and no disease in itself.

Now the queen bee, after her "marringe flight"—which occurs very soon after her maturity—does not use her organs of flight at all for a year, or till she leads a swarm from the hive, when, with the majority of the bees, she goes forth, and by use of muscles, long in disuse, she rapidly wings her way over meadow and woodland, sometimes for miles, before she and her attendants reach the new home, already pre-empted. Here then is an anomaly, which, so far as I know, finds no parallel among animals.

True, some contend that the queen does take recreation trips in the interims of swarming and mating tours; but such assertions are mere conjectures.

Among some other of the social hymenoptera, there is a less striking illustration of the same curious fact. The queen bumble bee, however, does much work which the queen honey bee

leaves wholly to the workers. Early in the season she does all the gathering. It is not probable either that she indulges in many, if any, long flights, after she settles down to exclusive egg laying.

We see from the above that clipping the queen's wings is no injury to her; in fact it is an infinitesimal gain, as there is a little loss tissue to nourish, and that a perfectly useless part except as the queen may need it to fly forth with a swarm.

Whether then we should clip or not should depend entirely upon our own ideas of its wisdom as regards ease of manipulation, convenience and, possibly, our notions of beauty.

The ants which, as Lubbock shows, are intellectually equal to the highest of animals, in some respects, are not deterred by aesthetic notions in this matter, but are urged on by motives of policy. The worker ants clip the wings of their queens. I would say "go to the ant thou" apiarist, "consider her ways."—*The American Apiculturist*.

### WINTERING BEES.

A NOT UNCOMMON EXPERIENCE.

Bee-keepers all over are complaining of the heavy losses during the past winter. My own apiary has been sadly reduced in numbers, about sixteen colonies having perished—four in chaff hives, and the rest on the summer stands with a small shed built round them and packed with saw-dust. Starvation killed them all, except two which succumbed to dysentery with hives full of honey. The latter couldn't be helped; the rest was carelessness or lack of courage. The honey season closed so early last year that there was an unusual consumption of stores and robbing was indulged in very freely. It was almost impossible to open a hive after August, to see what condition it was in, without having the whole apiary pitching in to see what the fuss was about, and the stinging was something terrific. I have never worked a tent to my satisfaction, and so I let them take their chances. Had there been mild days in March as usual, a good many might have been saved; but it is better to let bees alone when the mercury is below zero. I don't consider this proves anything against our door wintering, which has always succeeded with me, but simply that bees can't live on empty combs, and must have plenty of food for all emergencies, and that a lot of full well-sealed combs should be put away in the summer, so that a couple any way can be slipped into the hives at the last moment just before closing up for the winter. The colonies that are left are doing very nicely and as there is a splendid show for white clover, they will probably make plenty of honey this summer. Y.

Stratford, May, 1885.

### SHALL WE USE FULL SHEETS OF FOUNDATION IN THE BROOD NEST.

At the Michigan State convention Professor Cook is reported to have said: "There is no doubt in my mind that bees do not secrete wax when they have no use for it." The inference would be that when wax is secreted it is always as a result of the consumption of an increased quantity of honey. My observations have led me to a different conclusion. On going over the debris on the bottom boards with a lens, when searching for dry, feces I have often been surprised at the large quantity of scales of wax, fresh from the wax pockets of the bees, to be found beneath the cluster in winter. I have often picked the scales from the wax pockets of dead bees found on the bottom boards. Since bees secrete so much wax in winter "when they have no use for it," and at

a time when the consumption of food is at the minimum, it seems probably that during the honey harvest they also secrete it when it is required, without consuming much more honey, and that after all Mr. Doolittle is not so far astray when he says he can raise combs cheaper than he can buy them. This season we were putting in strips of foundation, and we are giving new swarms only a few frames at first to prevent the building of drone comb. A case of sections, having starters, full size, is put on at once to give the bees something to do while the comb for the brood-nest is being built. Second swarms are prevented by depleting the old hive of most of its bees; and by throwing nearly the whole force of workers in with the new swarm, we hope to secure a fair crop of comb honey. We prevent the queen from going into the sections by shifting the section case to one side, reducing the "continuous passage ways" to slots so narrow that while the workers are allowed to pass through the queen is excluded.

#### BEE MANIPULATION.

To examine a colony, the first thing to be done is to blow a little smoke at the entrance, and by the way, at no other time save when using smoke should one stand in front of his hives—all operations should be performed from the rear. In using smoke there is no necessity of blowing in a large amount, the smallest whiff is just as good as though the bees were suffocated with volumes of it.

After blowing in the smoke, the operator proceeds to the rear of the hive, and waits a moment till the bees are filled with honey, then he will proceed to take off the cover of the hive and lay it to one side; the next thing is to remove the covering mat from the frames; this, as well as all motions made around a bee-hive, should be done slowly and deliberately. Bees seem to detest any quick motions, and will resent them with a sting, when otherwise they would be as amiable as you please. After removing the mat, the centre frames on one side or the other should be crowded together a little to give room to remove the outside frame. As soon as sufficient space is formed, the outside frame should be carefully taken out, examined for any desired purpose, and then carefully stood up beside the hive, or, what is better carefully set into an empty hive or a light box made for that especial purpose.

After the first frame is removed, all subsequent manipulation comes easy enough, for all there is to be done is to take out the next frame, examine and replace it in the position occupied by the first one, and so on till all the frames are looked over, when the first frame can be set in the place of the last one taken out. In case, by reasons of any inequalities or bulges in the face, it does not fit right, these inequalities may be shaved off with a sharp knife, or the frames may be set again in their original position. As the first method is much the easier, the apiarist should take care to see that each comb is interchangeable, not only with every other comb in the hive, but with every other comb in the whole apiary. This will be the means of simplifying his work, and making it easier to perform than it otherwise would be. Time is money, and every step taken to save time in an apiary is one in the right direction, and will be well appreciated on a day with the temperature at 100 F. or more, and fifty colonies to examine before night.

The manipulating of a colony is the simplest work of the apiary, as it is purely mechanical and manual, and can be easily learned by practice. To know when and why to manipulate is a far more serious undertaking, and one that

requires a vast amount of experience and study to fully learn, but when learned it comprises the larger portion of what is required to make an expert apiarist.

#### A SAFE BUSINESS.

With our modern improvements, bee keeping is made a safe, sure, profitable and pleasant business. After the hives are made—movable frame hives, of course—the ladies can care for the bees and do all that need to be done in the apiary. With the modesty of real worth, these wonderful little creatures commend themselves alike to the naturalist, the amateur, the moralist, and particularly to persons of small means, and those who, from lack of education or from physical ailments, are unfitted for other labor. Unlike other live stock, bees are self supporting. They not only provide their own food, but with a little care will lay up a large stock of surplus honey, which, if in nice shape, sells readily. There would undoubtedly be a general rush into bee-keeping, were it not for the fear of stings, and a vague belief that "luck" has something to do with successful management. A little practical knowledge of the subject will enable any one of ordinary intelligence to obtain perfect control over his bees, and also open his eyes to the fact that the same rules and regulations governing all other branches of business are applicable to this, and that which is termed "good luck" is the direct result of an intelligent application of the rules laid down in our bee literature.

#### TAKE CARE OF THE COMBS.

The combs in a hive may be considered fully half the worth of the colony, and though the bees die leaving the combs soiled with mould and full of dead bees, they should be taken care of for future use. It is not necessary that all dead bees be removed; simply brush them off and put the combs in some dry place free from rats or mice. The bees will clean the combs much better and faster than you could do it yourself. They may be given, one at a time, to strong colonies during the early spring, and you will be surprised with what rapidity they will clean them out. Plenty of extra combs is one of the most important features of a modern apiary. With a hive partially filled with these, a new swarm is ready to go into the new sections; while if it be necessary for them to stop and build the combs, the honey season may be virtually over before they have them sufficiently completed to commence the storage of surplus honey. Were we starting anew, we should invest half our capital in empty combs, or foundations from which to make them.

STINGLESS bees are one of the sensations of the apiary. While it is true that they do not sting, it is also true that as honey gatherers they amount to very little.

If a day is lost, it is lost for ever, and a day's work for one hundred stands of bees, in the best of the season, is from 500 to 700 lbs., and the price of that would pay a hired man a month's wages. Again if the combs get full and have no room, the bees will swarm, and that takes time to put them back, so both you and the bees have lost time which is valuable if counted right.

BEES occupy no space on farms and the product from them is all profit. They require but little attention, and manufacture honey when everything else is idle. Though needing but occasional notice from their keepers, yet at times they need help, not from the lack of ability to care for themselves but on account of partially changed conditions due to management and domestication by man.

#### HOW A CELL IS FILLED WITH HONEY.

Says Dr. C. Spencer. In my observatory hive one cell was built against the glass, and that afforded an excellent opportunity of seeing how bees deposit honey in the cell. First, a bee deposited a thin coating of honey upon the base of the cell, making a sort of varnish, as it were, to the base of the cell. The next bee that came with honey raised up the lower edge of this film of honey and forced its honey beneath; the next bee did the same, and this film acted as a kind of diaphragm, keeping the honey in the cell. When the cell is full enough to be sealed, the bees commence contracting the opening with wax, until there is only a small hole left in the centre, when they appear to take one little flake of wax and pat it down over the opening. At any time during the process of filling the cell, the honey could be withdrawn with a hypodermic syringe, and the "diaphragm" left hanging in the cell.

If you are ordering new bee hives, have them well dried. Bees often desert new hives on account of the smell of fresh paint.

BEGINNERS at bee-keeping should first prepare themselves, not only by a study of the best works on the subject of bees and their habits, but also by observation, for the disappointments are as many to beginners as they are rare to experts. So many improvements have been made in the construction of hives and the artificial swarming that the necessity for knowing just how to manage for the best results is almost imperative.

#### KINDNESS TO ANIMALS.

That animals appreciate kind treatment requires no further proof than is exhibited in every look and act of the animal itself. It takes but a few minutes for the temper of the master of animals to be imparted to the animals in his charge. If he goes to the yard with a club in hand and boisterous words and oaths in his mouth, there will soon be commotion in the entire yard; the stronger animals will commence to gouge and hook at the weaker, and there is a general spirit of anger and dissatisfaction manifested at every point. Now, the farmer who creates such a feeling among the dumb beasts which have been committed to his care and keeping is to be pitied. It was never intended that though the weaker should be subject to the stronger it should be as with a rod of iron, but in the spirit of kindness.

How much pleasanter it is for the farmer to enter his yard and have the animals confined therein manifest a show of pleasure at his approach, as though expecting a kind word or caress, than to start away as though in expectation of a harsh word or kick. Kindness pays at all times. Inspire confidence in animals; let them know that you are their protector, and the willingness with which they will obey will be very marked. Another thing—an animal or animals that repose in quiet are much more easily kept than those that are kept in a state of nervous excitability by harsh treatment. This principle is illustrated in the case of milch cows. Their flow of milk may be arrested and very much impeded by harsh language, or kicking, or grounding, when in the stable. If the best results would be obtained by those who have stock in their charge, kindness to them must be observed.

THE "course of true love," traced by letters in a breach-of-promise suit, read in this manner: "Dear Mr. Smith," "My dear John," "My darling John," "My own darling Jack," "My darling John," "Dear John," "Dear Sir," "Sir," and all was over.

## The Grange Record.

### OFFICERS OF THE DOMINION GRANGE.

OFFICE.	NAME.	POST OFFICE.
Worthy Master	Robt. Welch	Blenheim, Ont.
Overseer	A. B. Black	Amberst, N. S.
Secretary	Henry Glendinning	Manilla, Ont.
Treasurer	J. P. Bull	Davenport, "
Lecturer	Chas. Moffat	Edge Hill, "
Chaplain	Geo. Lethbridge	Strathburn, "
Steward	Thos. S. McLeod	Dalston, "
Ass't Steward	Wm. Brock	Adelaide, "
Gatekeeper	L. VanCamp	Bowman's To "

#### LADY OFFICERS.

Coros.	Mrs. G. Lethbridge	Strathburn, Ont.
Pomona	T. S. McLeod	Dalston, "
Flora	C. Moffat	Edge Hill, "
L. A. Steward	F. H. Hilborn	Uxbridge, "

#### EXECUTIVE COMMITTEE.

Jabel Robinson	Middlemarch, Ont.
Robert Currie	Wingham, "

#### AUDITORS.

Chas. Moffat	Edge Hill, Ont.
T. S. McLeod	Dalston, "

### OFFICERS OF ONTARIO PROV. GRANGE.

OFFICE.	NAME.	POST OFFICE.
Worthy Master	R. Currie	Wingham.
Overseer	Thos. S. McLeod	Dalston.
Secretary	A. Gifford	Meaford.
Lecturer	D. Keelsdy	Peters, "
Treasurer	R. Wilkie	Blenheim.
Chaplain	L. Wright	Banks.
Steward	Thos. Keazin	Castleton.
Ass't-Steward	Wm. Brock	Adelaide.
Gatekeeper	J. P. Palmer	Fenelon Falls.

#### LADY OFFICERS.

Coros.	Mrs. C. Moffatt	Edge Hill.
Pomona	G. Lethbridge	Strathburn.
Flora	F. M. Cryster	Dellit.
L. A. Steward	J. McClure	Williscroft.

#### EXECUTIVE COMMITTEE.

Thomas S. McLeod, Esq.	Dalston.
Chas. Moffat, Esq.	Edge Hill.

#### AUDITORS.

W. H. White, Esq.	Chatham.
S. Bollachoy, Esq.	Paisley.

FOR THE RURAL CANADIAN.

### TREES ADAPTED FOR ONTARIO, AND THEIR TREATMENT.

MR. EDITOR.—Some facts concerning tree-planting may interest your readers. Those trees which experience proves best adapted to our Canadian climate are here, for comprehension, divided into several classes. First, we will take those deciduous trees which are easily grown, that is to say, they have fibrous roots, rendering them easy to transplant. As their young saplings stand in the undergrowth of the forest, they will be found with sufficient roots, so that care be taken, to transplant well.

**MAPLES.**—Native Hard Maple, *Acer saccharinum*; Native Scarlet or Soft Maple, *Acer rubrum*; Silver Leaf, *Acer dasycarpum*; Norway Maple, *Acer platanoides*; Ash-leaved Maple, *Acer negundo*.

**ELMS.**—American or White Elm, *Ulmus Americana*; Corkbarked or Winged Elm, *Ulmus inflata*; Scotch or Witch Elm, *Ulmus montana*.

**LINDENS.**—European Linden, *Tilia Europæa*; Basswood, *Tilia Americana*.

**ASH.**—Native (white), *Fraxinus Americana*; European Ash, *Fraxinus Europæa*.

**POPLARS.**—Lombardy Poplar, *Populus dilatata*; Silver Leaved Poplar, *Populus alba*; Balm of Gilead or Cotton Poplar, *Populus balsamifera*.

**CHESTNUTS.**—Horse Chestnuts, *Æsculus hippocastanum*; Sweet Chestnut, *Castanea Americana*.

**MOUNTAIN ASH.**—*Sorbus*.

The following trees are also well adapted to our country—in fact, all native therein—yet cannot be handled like the former, owing to their having, in their natural condition, few roots. There are two ways of treating them, one to plant the nuts where the tree is to grow, the other to transplant them several times when young, which gives a mass of roots of far more certain growth when planted in their ultimate position.

**HARDWOODED TREES.**—Hickory, *Carya*; Oak, *Quercus*; Beech, *Fagus*; Walnut, *Juglans*.

The time for planting all the above is, in spring, from the time the frost leaves till May 15th. The season, however, can be prolonged to the 15th of June by observing to cut back the tops of the trees. In the fall, from the 20th of October

till the ground is too hard frozen for digging. When planting them, be careful to strip the leaves off, as the sap remaining in the trees soon evaporates through the leaves, causing the trees to shrivel up, and destroying their chance of growth.

The next class to mention as peculiarly suited here is the evergreen. Those of the spruce and cedar variety are grown more easily than pines or junipers, from having a greater quantity of fine roots. This class comprises: White or Native Spruce, *Abies alba*; Norway Spruce, *Abies excelsa*; Balsam Spruce or Fir Proper, *Tonga balsamifera*; Hemlock, *Abies Canadensis*; White Cedar, *Thuja occidentalis*.

The spruce and cedar family will grow in damper situations than the pine, but all succeed better in fairly drained soil.

The next is the pine. Unless transplanted several times when young, these do not throw out many roots, and those thrown out are fine, long, and easily disbarked, unless great care be taken in removing them from the soil. The most suitable varieties are: White Pine, *Pinus strobus*; Weymouth Pine, *Pinus cembra*; Norway Pine, *Pinus rubra*; Austrian Pine, *Pinus Austriaca*; Scotch Pine, *Pinus sylvestris*.

The planting season for all the above evergreens is from May 15 to June 15, or just as the buds are commencing to burst. After spring growth, say early in August, will also do, though the first is better.

The last which need be noted is the

**LARCH.**—European Larch, *Larix Europæa*; Native Larch (tamarack), *Larix Americana*.

This tree may be termed a deciduous evergreen, and succeeds best when planted late in fall or first thing in spring, as it commences to grow with the first warm rays of the sun, and is uncertain unless great care is taken to keep it damp. This advice is meant in case of large trees, such as those five to seven feet high; small plants are grown more easily.

With respect to soil, all trees thrive in well-drained soil, varying from a sandy loam to a clay soil, not of too stiff a nature. A clay loam suits them all.

Soft woods, such as willows and poplars, succeed better than others in damp places. I have never known, on dry soil, such immense specimens of Soft Maple, Water Elm, or Black Ash, as I have frequently observed in low and moist situations in the original forest, and where planted in cities I have found, with respect to the Soft Maple, the same occur.

Trees, if planted in quantity, so as to cover and soon shade the ground, on hard clay or poor sand, will not indeed make the progress they will on better land, but will with care live and thrive, and will in time, from their annually falling leaves, cover that poor soil with one of a much better nature, fit to receive and grow their falling seeds, and perpetuate the forest. For this purpose pines are most suitable for sand, deciduous trees for clay.

When transplanting trees keep the roots moist continually till covered with the soil. Another essential point is to dip the roots in thin mud. This is termed "grouting" the roots. In case of evergreens, keep the sun carefully from striking on the roots. A very short drying will harden the resin in the tubes and kill the tree. Choose small trees; it is better, if time can be given to wait, to take a number very small, plant them closely in the garden and transplant in a year or two. This gives good roots. But I have known them often do well with one careful planting from the bush.

The above facts will be useful to such of your readers as are about to plant trees. I may, perhaps, be pardoned for taking the opportunity to

impress on them how necessary it is, considering the rapid disappearance of our forests, and that even their small remains, dispersed throughout our settled townships, are going down before the axe of the woodman and the teeth of the cattle, to commence protecting farms by rows of evergreens at least, or if possible by fresh plantations of deciduous trees, acres broad, along the north of every farm. In the fast-coming scarcity of wood in this country, where once it was so abundant, no crop is going to pay so well as the timber one.

Toronto, June 13, 1885

R. W. PIPERS.

### AGRICULTURAL COLLEGE GRADUATES ASSOCIATION.

At the annual meeting of the Ontario Agricultural and Experimental Union, held at the Agricultural College in March, the graduates who were present formed themselves into an association for the purpose of securing some changes in the constitution of the College, and for other purposes.

The following resolutions were passed by the association:

Resolved,—That it is very desirable that the College be placed upon an independent basis, and controlled by an elective board, consisting largely of practical farmers, and until this can be accomplished we would recommend that an advisory board be appointed to advise and assist the Commissioner of Agriculture.

That all candidates for admission shall be required to pass a strict examination in farm work and furnish evidence of having worked for at least one year upon a farm.

That the hours of compulsory labour be reduced from five to an average of two and one half hours per day.

That in justice to the agricultural youth of the Province, a fair proportion of the existing High schools should be converted into agricultural schools by substitution the study of the agricultural sciences in the place of French, Latin, Greek and Mathematics.

That Messrs R. F. Holterman, J. Tile, and J. A. Campbell be a committee to lay the views of the association before the Government.

### GRANGE THOUGHTS.

Going to law is very poor business, especially for farmers, who find, usually, that the results are disappointing even when their cases are won. Patrons of Husbandry have ways of settling their difficulties without going to the courts, and it is their duty to employ the means provided by the Grange. In nine cases out of ten a law-suit results in losses to both plaintiff and defendant. The lawyers get money out of litigation, and they are the only ones, in most cases, who may profit. Patrons should be very careful indeed about beginning suits for mere debts. There may be great wrongs that cannot be corrected without recourse to law, but when recovery of debt is the object, unless the sum is large, it is quite as well to let it go as loss rather than attempt to collect through litigation. And besides inevitable losses that occur through lawsuits, there is painful anxiety that counts for even more. The right way is to avoid going to law whenever it is possible—and it is possible in a great majority of cases.

For out-of-door Grange meetings—summer picnics—ample preparation must be made if they are to be fully productive, and for such preparation time is required. Such meetings need not be costly—they should not be. The requirement is simply for harmonious action—each interested person prepared to contribute what the common good may suggest. Summer picnics are designed,

primarily, for recreation, but with it advancement of the interests of the Order. Each member may have real gain if the meetings are properly managed, and this may be without the services of distinguished speakers, certainly without brass bands. The true method is to arrange the order with references to the fullest enjoyment compatible with opportunities offered, and this necessarily implies economy in cost. Summer picnics are very desirable in localities where Granges are established, because they familiarize the general public with the principles of the Order, and serve to remove unfavourable impressions quite too common among farmers who have preferred to criticise the Grange ignorantly, rather than acquaint themselves with its true purposes.—*From the Husbandman.*

#### YOUNG MEN IN THE GRANGE.

We have often been asked if we deem it advantageous for a young man to become a Granger. I reply, unhesitatingly, yes; and for the reasons:

1. That the Order is founded upon great truths, and inculcates gratefulness to the Creator, fidelity to country and fraternity to fellow-men; that its ritual and work are based upon these principles, and an education in and practice of them cannot but improve and elevate the member.

2. That it fits the member for the duties of a true citizen, and that attendance at meetings will be a more practical and valuable instruction, not only in matters pertaining to sociability, charity, benevolence, visitation of the sick, etc., but by service on committees, making reports, participating in and presiding through debates, than he could obtain in any other manner.

3. That it stimulates his talent as well as his laudable ambition, and places him upon his merit, unhampered by the influence of "sphere, or caste, or position," that permeate outside affairs.

4. That it surrounds him by those who will be interested in him, and, if worthy, assist, counsel and encourage him.

5. It gives him something to do of a useful nature for others, and provides a place where an afternoon can be spent, away from the temptations and dangerous associations that ruin so many of our youth.

6. It provides tangible, practical aid in times of sickness and distress, and, in the event of death, ensures a fraternal and decent sepulchre or burial.—*From a lecture by Bro. N. Winter.*

FARMING pays from every point of view. The idea that a farmer can make an independent living by hard work, but cannot get rich, is full of error. Farming cannot be compared with banking, because a man has to get rich at something else before he can be a banker. But when due allowance is made for the different amount of capital invested, we venture to assert that the average farmer makes more money, works less, has better health and lives longer than the average banker.

AGRICULTURE cannot be carried out by any rigid rule. The soil of no two fields is precisely alike, or would be alike benefited by the same treatment. No two seasons are precisely alike—all is variety and change. Intelligent farming is learning to adapt methods to conditions and circumstances. There are fixed principles that apply to each condition. The man who masters principles can become a master in their practice.

THE importance of having cows to calve in the fall so as to have the heaviest flow of milk in the winter, when milk and butter are high, cannot be too well understood. Some farmers value fall calves as highly as spring calves, for the reason that they are ready to turn on grass as soon as it comes in the spring, and so get the full benefit of a summer's pasture.

#### DON'T STOP MY PAPER.

Don't stop my paper, printer;  
Don't strike my name off yet;  
You know the times are stringent,  
And dollars hard to get;  
But tug a little harder,  
Is what I mean to do,  
And scrape the dimes together—  
Enough for me and you.

I can't afford to drop it;  
I find it doesn't pay  
To do without a paper  
However others may.  
I hate to ask my neighbours  
To give me theirs on loan;  
They don't just say, but mean it:  
"Why don't you have your own?"

You can't tell how we miss it,  
If it, by any fate,  
Should happen not to reach us,  
Or come a little late.  
Then all is in a hubbub,  
And things go all awry,  
And—printer, if you're married,  
You'll know the reason why!

The children want their stories,  
And wife is anxious, too,  
At first to glance it over,  
And then to read it through;  
And I to read the leaders,  
And con the book reviews,  
And scan the correspondence  
And every bit of news.

I cannot do without it;  
It is no use to try:  
The other people take it,  
And, printer, so must I,  
I, too, must keep me posted  
And know what's going on.  
Or feel and be accounted  
A foggy simpleton.

Then take it kindly, printer.  
If pay is somewhat slow,  
For cash is not so plenty,  
And wants not few, you know;  
But I must have the paper,  
Cost what it may to me;  
I'd rather dock my sugar,  
And do without my tea.

So, printer, don't you stop it  
Unless you want my frown,  
For here's the year's subscription.  
And credit it right down,  
And send the paper promptly  
And regularly on,  
And let it bring us weekly  
Its welcomed benison.

—Exchange.

#### MOTHER LOVE.

No love like the love of a mother,  
When trials are gathering fast;  
Though fond is the care of a brother,  
Sometime it will fail at the last;  
Should you turn from the pathway of duty,  
A sister's affection may fade;  
But a mother's love shows its best beauty  
When her child to sin is betrayed.

A father may speak stern and coldly  
If his son has wandered astray,  
But mother will stand forward boldly  
And help him regain the lost way,  
And speak to him kindly in warning,  
With just as tender a tone  
As she did in childhood's pure morning,  
Ere sorrow and crime he had known.

Ah no! there's no love like a mother's,  
So noble, forgiving and true;  
We may trust to many another's  
And value it that it is new.  
To find, when life's sun is shrouded,  
And our pathway enters the gloom,  
Their love for us, too, will be clouded,  
While hers follows us to the tomb.

In the work of feeding animals, by Professor Stewart, it is stated, as the result of careful experiment, that ten pounds of turnips and one and a half pounds of corn will fatten a young sheep or lamb faster than three pounds of corn alone.

HORSES, cattle, sheep, hogs and poultry are the farmer's mills, condensing the crude products of the farm into a more valuable but less bulky form for transportation. The farmer who does not use these mills misses one of the most successful means of making the farm pay.

#### HIGHLY ENCOURAGING.

It affords us no ordinary pleasure and encouragement not only to know that our efforts to place before the farmers of Canada a first-class agricultural paper are meeting with the hearty approval of the class to which we look for support, but are also recognized by our brethren of the press. The *Toronto Mail* says:—

"THE RURAL CANADIAN for June is an excellent number, and not only of interest to the farmers but to the household, a department that is well edited. Several choice illustrations add to the value of THE RURAL, which is a credit to the agricultural literature of Canada."

The *Woodstock Sentinel Review*: "It occupies the very front rank among agricultural papers. The arrangement of its contents is admirable, and in all respects it is a thoroughly progressive and valuable journal."

And the *Woodstock Times* pronounces it "A model agricultural paper. . . . Every farmer in the country should subscribe for it."

BILL ARP says: "The farmer is the freest man upon earth and the most independent. He has more latitude and longitude. He has a house in the country, with plenty of pure air and good water. If he does not make much in the field, he has no occasion to spend but little. He can raise his own hogs, sheep, cattle and chickens. His wood costs him nothing, and the luxury of big back-logs and blazing fires, in open fire-places, all winter, is something that city people long for but cannot afford."

PURRY in butter and cheese constitutes its chief value in the markets of the world. It may be perfectly pure after it has lost the fragrance imparted to it by the nature of the food taken. Any peculiarity of herbage or other food is imparted to the milk. Poisons may be conveyed to milk in food. The chief value of butter over any other fat, oil, lard, tallow, etc., is the presence of grateful odour. This may add from twenty-five to fifty per cents to its value. It does not involve three per cent in the cost of manufacture.

Sow with a generous hand;  
Lause not for toil or pain;  
Weary not through the heat of summer,  
Weary not through the cold spring rain,  
But wait till the autumn comes  
For the sheaves of golden grain.  
Sow, and look onward, upward  
Where the starry light appears—  
Where, in spite of the coward's doubting,  
Or your own heart's trembling fears,  
You shall reap in joy the harvest  
You have sown to-day in tears.

—Adelaide A. Proctor.

AN excellent preparation for removing grease-spots and stains from carpets and clothing is made of two ounces of aqua of ammonia, two ounces of white Castile soap, one ounce of glycerine, one ounce of ether. Cut the soap fine, dissolve in one pint of water over the fire; add two quarts of water and the other ingredients. For washing soiled garments, mix with water in the proportion of a teacupful to one ordinary-sized pail of water. For removing spots, use a sponge or clean flannel cloth, and with a dry cloth rub as dry as possible. Woollen goods may be made to look bright and fresh by being sponged with this. German journals allude to the efficacy of "benzole magnesia" as a grease eradicator. It is prepared by saturating calcined magnesia with benzole. A little of this powder rubbed on a greasy stain on paper or any fabric will remove it, but old stains may require a repetition of the process. The mixture is said to be excellent for cleansing windows.—*Popular Science Monthly.*



## HOME CIRCLE.

## THE DEACON'S TITHE.

They had a new minister at Seabrook. One Parson Thornleigh, who had kept the flock for forty years, had gone to his long home; and in his stead had come an honest, plain-spoken young divine with an earnest, fearless eloquence of his own. And now the worn door-stone of the little gray church on the hill was once more trodden by feet which had long been strangers to it. The minister boarded, having no family, at Deacon Larrabee's.

"He's the least bit uncertain on some points," said the deacon, leaning on his hoe-handle, and talking across the fence to his neighbour Gray, who leaned on his hoe-handle to listen—"a bit uncertain. But I like him—I do, no mistake; and I believe the Lord's going to bless us through him!"

"Amen!" was neighbour Gray's hearty response.

They hoed a dozen hills in silence, their hoes keeping time to the merry song of a bird in the orchard. Then Mr. Gray paused to wipe the perspiration from his face.

"This hot weather's liable to make sickness," said he. "I suppose you've heard that one of the Widow Sperry's boys is down with a fever?"

"Sho! now you don't say so!" exclaimed the deacon, commiseratingly. "Make it hard for her, won't it?"

"Yes, particularly when she's so lately lost her cow. I've been saying that we'd all ought to take hold and make it up to her. If I'd more than one cow on my place, I wouldn't stand to talk long, now, I tell you; but I lost my two best ones last spring. If I hadn't—"

It might have been unintentional that, suddenly facing about, Mr. Gray threw his glance toward the hill pasture where his neighbour's cows were quietly feeding. At all events, the deacon could scarcely help noticing the action. And he understood its purport. An uneasy flush mounted to his face as he struck vigorously into the next hill.

"She ought to have kept her cow out of the road. My cattle never get into the mill pond and drown. If they should I would not expect anybody to make 'em up to me. She'd no more call, had the widow, to let her cow run, than I'd have to turn my whole drove out."

"It's a pretty hard case, nevertheless," said Mr. Gray.

And then the fragmentary conversation, tossed piece-meal back and forth across the fence as the neighbours went steadily on with their work, drifted into other channels.

There had been an interested listener to the colloquy narrated above. On the shady side of the wall which separated Deacon Larrabee's orchard and cornfield, sat, book in hand, the Rev. Mr. Weston. He arose, as the chat which floated to his hearing began to be of crops and haying, and walked slowly away along the orchard path, with a thoughtful smile upon his face.

That night, when the deacon took the shining milk pails from the dresser and proceeded to the farm yard, the young clergyman followed him. He stood leaning against the bars, watching the yellow stars come out in the sky and looking abroad over the deacon's possessions, shadowy now, but substantial enough by daylight.

"You are a prosperous man, deacon."

A smile of satisfaction overspread the deacon's countenance as he stood for a moment patting the sleek neck of a favourite cow.

"Well, yes," said he; "but I've made myself. A pig and a pitchfork, sir, was all I had to begin with."

"How does your neighbour Gray get along?"

"Gray? well, truth to tell, he'll never be fore-handed if he lives to be the age of Methuselah. He's a hard-working man enough, but the way 'tis I can't tell you; there's never a poor creature comes into our town that doesn't head direct for John Gray's. Must be instinct teaches 'em, for he gives to 'em all, deserving or not. I believe he'd take the coat off his back if 'twas needed. He's a good neighbour—a good neighbour; but he'll never get anything to speak of ahead."

"But lay up for yourselves treasures in heaven, where neither moth nor rust doth corrupt, and where thieves do not break through and steal," quoted the minister.

"Yes, yes; but if I mind me right the good book says something, too, about providing for one's own household—eh?"

Mr. Weston smiled. "I believe there is a passage to that effect," said he.

"And," went on the deacon, a little triumphantly, "if neighbour Gray would give a certain portion—"

"A tithe?" interpolated the minister.

"And not go beyond that," continued Deacon Larrabee, "he'd be better off in one respect, and no worse off in the other, to my thinking. I don't believe in—in indiscriminate giving."

"Nor do I," was the quiet rejoinder. Then there was silence while Deacon Larrabee filled another pail with snowy foam.

"How many cows have you, deacon?"

"Ten," answered the deacon, with a pardonable pride showing itself in voice and feature; "and it's the finest herd in our country. They're grade Jerseys."

"Yes," returned Mr. Weston, a little absently. Then, after a slight pause, "Deacon, I overheard the conversation between you and your neighbour Gray this morning, relating to Mrs. Sperry and her misfortunes. Poor lady! She does need substantial sympathy. Can you afford to lend a tithe of your cows to the Lord?"

"Which means that I give one of them to the widow," uttered the deacon with a wry face. "No, sir, I'm afraid I can't. She wanted to buy one the other day, but I told her I'd none to spare. It was all owing to her carelessness that she lost her cow, and I don't believe in upholding improvidence. Get to going on that way, and we'd all be on the town farm before we knew it."

Mr. Weston wore a thoughtful expression, yet a gleam of something like amusement lighted up his eyes.

"Will you sell me one of your cows?" he asked.

"I—I have no need of money now," replied the deacon hesitatingly.

The minister continued: "I heard you say this morning that you would be glad to give a good man extra wages to help you through your haying, but you were afraid it would be difficult to procure the needful assistance at any price. Will you take me, and let me pay for the cow in that way?"

A twinkle both genial and quizzical dawned in the deacon's gray eyes. For a moment he studied the young minister attentively. He was not at all what his neighbours would have denominated free-handed, yet he had a just appreciation of the quality of benevolence in other people. Neither was he a hard man at heart. It was only that the prosperity which had attended his every undertaking caused him to look upon the lack of it in a neighbour's affairs as an entirely unnecessary evil—one which prudence and forethought might overcome. Now he shook his petitioner's hand heartily.

"It's a bargain," said he. "When will you take the cow off my hands?"

"To-night, if you will lend me your assistance," was the ready response.

"Better take one of those I haven't milked," said the deacon, with a smile, "and save me trouble."

Accordingly, a little while later, the minister, accompanied by the deacon, led his recent acquisition down the farm house lane, and away along the thoroughfare of the sleepy little hamlet to the tiny cottage where dwelt Mrs. Sperry and her brood. There they fastened the animal to a convenient post, rapped softly, and departed, with the peaceful consciousness which attends upon a worthy deed resting upon one of them, at least, as a mantle.

Next morning, when the deacon, hoe on shoulder, was leaving his door yard for his cornfield, he encountered Mrs. Sperry. Her eyes were red, as with long watching and weeping, and her thin lips trembled with the emotion which she vainly endeavoured to control.

She put out both hands to him. "Deacon Larrabee," she said, "I have come to thank you, and ask your forgiveness. Oh, I have had such hard thoughts of you—how cruelly hard only God knows—and my own heart. Why, I almost came to pray that some dreadful misfortune might overtake you—and all because you would not sell me the cow you meant to give me."

"I—really—I," began the deacon. The situation was a most embarrassing one, and rendered doubly so by the knowledge that beside the open window of the room appropriated to his library, the minister was sitting, no doubt enjoying the conversation in the fullest measure. "Really, Mrs. Sperry—I—"

"Now, don't try to deny it," laughed the widow, a little nervously. "I knew the cow, Deacon Larrabee, and—" she laughed again; "I am bowed with contrition to think of my unjust feelings toward you. But I shall always pray that you may prosper hereafter, deacon; for I am sure you will have a good account of your stewardship for the Master."

The deacon mopped his scarlet face in sore perplexity. How could he confess that the gift was none of his? Yet there really seemed no other way of escaping from the one-horned dilemma in which he found himself, unless—

Well, the widow's generous thanks were very pleasant to hear; and, after a momentary deliberation, the old deacon's good sense and genuine manliness came to the fore. He only wished that the happy thought had been his, the charity his own spontaneous deed.

"I am glad if the gift pleases you, Mrs. Sperry," said he, taking her hand, "and now please say no more about it. Go into the house and see the woman. I'll warrant she has a glass of jelly for the sick boy."

To Mr. Weston, later on he said, with a laugh, and a jocular twinkle in his eye, "I've hired my man, and shall not need you; so we'll shake hands and call it square. I think that's what I meant to do all the while, though I wasn't really sensible of it. But I'll tell you one thing, Brother Weston, I don't believe the next tithe will come so hard."

## TO MAKE BOYS GOOD FARMERS.

To parents who have boys growing up on the farm, nothing should be neglected pertaining to farm life, to make them good farmers. A half-way farmer, like an ill-instructed mechanic, or indolent shop-keeper, never does much good.

From the first, boys on the farm should be induced to take an interest in the farm, in the stock, in the implements, and in all that pertains to the business. Tell them all your plans, your successes and failures; give them a

history of your life and what you did, and how you lived when a boy; but do not harp too much on the degenerate character of young men of the present age. Praise them when you can and encourage them to do better. Let them dress up in the evening instead of sitting around in their dirty clothes, as is too often the case. Set an example before them of attending church on Sunday, and such other times as are convenient, and take them out enough in the world so they will not be bashful, awkward, or ignorant of the ways of genteel society. But do not encourage strolling over the country, in company with other boys on Sunday, or allow them to go where they please, and when they please of nights. They may think you a little strict, but in mature life will thank you. In order to interest them on the farm, and make their lives agreeable and pleasant, give them a piece of ground to cultivate as their own, and allow them to have the money for their productions. Teach them economy, and try hard to have them industrious from a love of their occupation. A boy who is industrious because he is afraid of being punished can't amount to much as a farmer. Such a boy won't stay at home any longer than he can help it; and as soon as he thinks he can earn something at other occupations, he will desire to leave. When they secure money from any source, which is the fruit of their industry, help the boys to invest a good share of it in a pig, calf or colt, and allow it to grow up on the farm as theirs. Instruct them in such a way that they will, early in life, learn the value and use of money. This is a very important part of their education. Show them the folly of spending their money foolishly for everything they see; but encourage them to invest a share of their earnings in useful books and tools for their instruction and amusement. Provide warm and neatly furnished sitting and bed rooms, and brilliant lights. Furnish a good variety of useful books. Subscribe for several agricultural journals, so as to get them as much interested as possible in their occupation.

Teach them industry, economy, morality and Christianity, and steady temperate habits. Raise them up to love home and the farm, and they will be most likely to make good and prosperous farmers.—G., in *Indiana Farmer*.

#### HINTS TO HOME DRESSMAKERS.

To sew in sleeves: Take a piece of ribbon or binding about half an inch wide, tack it around the armhole inside the bodice, beginning at the seam of side-piece next front; tack it about an eighth of an inch from the edge, continue all around the armhole; be sure not to stretch the armhole nor full it.

To fit the sleeve into the armhole: Turn under to the tacking thread, put a pin into the sleeve through the tacking line, and then pass it through the tacking at the armhole of the bodice. The front seam of sleeve should be about one and a-half inch to the front of front side piece seam. Go on turning down to the tacking thread, and pinning the sleeve to the bodice till within two inches from the shoulder-seam. Now look to the back of the sleeve, and see that the under part from the front seam to the back fits properly. Pin it so that it fits. What little fulness remains must be equally distributed at the top of the shoulder. See to the length of sleeve, and turn up to that required, pinning it to the proper length. Now remove the bodice by taking out the pins from the shoulder and side-piece next front of the unfitted side of bodice. By this method the pins are left in down the front, and if any alteration has been made you can tack a line down to the pins before removing them.

To sew in the sleeve, take the front seam of

sleeve and put it exactly to the tacking which marks its position; have the inside of sleeve and bodice towards you, pin the sleeve and bodice tacking lines exactly to each other until within two inches of the shoulder seam; now go back to the under-seam from which you started and pin in the second time. When you come towards the top distribute the fulness equally along about three inches at the top. After pinning in tack closely; stitch the sleeve in strongly, out the turnings off within about half an inch of the stitching, and over-sew the edge of armhole, sleeve, and binding together neatly.—*Today's Lady's Book*.

#### LOOKING AT BOTH SIDES.

The good wife bustled about the house,  
Her face still bright with a pleasant smile,  
As broken snatches of happy song  
Strengthened her heart and her hands the while;  
The good man sat in the chimney nook,  
His little clay pipe within his lips,  
And all he'd made and all he had lost,  
Ready and clear on his finger tips.

"Good wife, I've just been thinking a bit;  
Nothing has done very good this year,  
Money is bound to be hard to get,  
And I can't make ends meet, I fear.  
How the cattle are going to feed,  
How we're to keep the boys at school,  
Is a kind of debit and credit sum  
I can't make balance by any rule."

She turned her around from the baking board,  
And she faced him there with a cheerful laugh;  
"Why, husband dear, one would really think  
That the good rich wheat was only chaff;  
And what if the wheat is only chaff;  
So long as we both are well and strong?  
I'm not a woman to worry a bit—  
But somehow or other we get along."

"For thirty years we have loved each other,  
Stood by each other whatever befell;  
Six boys have called us 'father' and 'mother,'  
And all of them living and doing well.  
We owe no man a penny, my dear,  
And both of us loving and well and strong.  
Good man, I wish you would smoke again,  
And think how well we have got along."

He filled his pipe with a pleasant laugh,  
He kissed his wife with a tender pride;  
He said: "I'll do as you tell me, love;  
I'll just count up on the other side."  
She left him then with his better thought,  
And lifted her work with a low, sweet song,  
A song that's followed me many a year—  
"Somehow or other we get along."

—*Mackay Standard*.

#### NEIGHBOURHOOD NUISANCES.

Borrowing is a necessity among us of that poorer class which constitutes the great majority. Few farmers have all the implements they sometimes need, and perhaps no family is not sometimes out of some essential article of daily want. And it is not to be regretted, for borrowing has its uses aside from the convenience of the borrower. It teaches the lesson of mutual dependence, and serves as a leveller with those inclined to feel "set up" by some trifling possessions beyond those of less fortunate neighbours. And if properly conducted, if not carried to a disagreeable excess, if tools are returned in proper season and condition, and entables in proper quantity and quality, it tends to promote good fellowship and makes us the better and warmer friends.

But the professional borrower whose daily business is to borrow, the man who demands your property as if it were his own, the family which keeps a child forever trotting after something which "pa forgot to buy," or "ma to send for," though "pa" is going to town, or down town, as the case may be, almost every day, is a nuisance. Tenfold more a nuisance when tools are not returned, or come home dulled or broken, without even a word about just restitution; when articles of diet come back less in quantity, or poor in quality, or not at all.

The professional beggar expects to be despised; but the meanest form of beggary is that enacted

under the name of borrowing, which "borrows" this, that, and the other, or "buys" and promises with no intention of payment or fulfillment. The beggar who begs outright and calls it begging, at least makes a show of gratitude, this other kind of beggar does not; it is no favour that he asks, for is he not going to pay?

This character exists in almost every community, and the query among their neighbours is, What are we to do with them? Are we to say yes to all their never-ending demands? But do we do right by them? We talk this over till their ears must burn; we vent our impatience in our complaints to each other; but do we ever say a word to them, to let them know that they are a nuisance, and that we want their demands abated?

Do they even guess that this thing causes them a loss of respect from others which no appearance of theirs can restore? Have we ever tried to see just what we ought to do, determining to do it even if they become our enemies?

And do we carefully seek out, and minister to the wants of those nobler and finer natures that shrink from asking even in sore need; who would almost or quite die and make no sign? Such it is a pleasure to befriend, if they do not go too far the other way and proudly resent our attempts to aid them.

There are many of the needy who belong to the golden mean; not too sensitive to ask in an extremity, nor to meet us half way when we would like to assist them, yet far above the practice of sponging, either openly or under false pretences which deceive nobody. To these should ever be tendered the right hand of fellowship, and in a spirit of true brother and sisterhood, such assistance as is in our power to bestow, and which we would gladly receive were the cases reversed.—*Indiana Farmer*.

#### KNITTING STOCKINGS.

Mrs. E. F., in the *Farm and Fireside*, says:— I was greatly benefited last winter by knitting my little girls' stockings a new way, and I trust all mothers who may do their own knitting may try it, for it more than doubles their wearing qualities. Cast on the required number of stitches and knit the usual length before narrowing; when ready to narrow do so once on each needle, and then knit six or seven times around before narrowing again; continue to narrow in that way, taking care that the narrowing does not occur in the same place, until the ankle is reached, when it should be of the size of an ordinary stocking. I have not found it necessary to narrow any after reaching the ankle until I came to the toe, which I narrow off as usual; but if the foot should seem too large, there could be a few stitches narrowed before coming to the toe.

Some may object to knitting them without a heel, but they fit just as well, and as the wear will never come two weeks in the same place, there is no knee to wear out, while the back is like new. I also knit No. 70 cream-coloured linen thread with the yarn down well past the knee, and find them actually proof against wear on a very active, restless child. Some people think it foolish to knit stockings, now that you can buy them so warm and cheap, but I never find them so warm as home-made, and I believe many err in dressing the feet too thin.

#### YOUNG MEN! -READ THIS.

THE VOLTAIC BELT Co., of Marshall, Michigan, offer to send their celebrated ELECTRO-VOLTAIC BELT and other ELECTRO-APPLIANCES on trial for thirty days, to men (young or old) afflicted with nervous debility, loss of vitality and manhood, and all kindred troubles. Also for rheumatism, neuralgia, paralysis, and many other diseases. Complete restoration to health, vigor and manhood guaranteed. No risk is incurred, as thirty day's trial is allowed. Write them at once for illustrated pamphlet free.

# CANADA THE FREE.

TUNE—"God save the Queen."

Arranged by JOHN CHESHIRE.

1st four verses by JOHN IMRIE, Toronto.

*Maestoso* *f*

1. God save our na - tive land, Free may sho ev - er stand

Fair Can - a - da; Long may we ev - er be, Sons of the

brave and free, Faith - ful to God and thee, Fair Can - a - da.

*Cres.*

2  
From every hostile band,  
Free us at Thy command,  
God save our land;  
Tho we are sons of toil,  
We will defend our soil,  
From all who would despoil,  
Our own dear land.

3  
God shield our volunteers,  
Sent forth 'mid prayers and tears,  
God save our men;  
As to the front they go,  
Eager to meet the foe,  
Help them to strike a blow  
For Canada.

4  
Fair as an opening flower,  
Planted in Heaven's bower,  
Fair Canada;  
Stretching from sea to sea,  
Great will thy future be,  
Land of the brave and free,  
Fair Canada.

5  
"God save our gracious Queen,  
Long live our noble Queen,  
God save the Queen;  
Send her victorious,  
Happy and glorious,  
Long to reign over us,  
God save the Queen."

## YOUNG CANADA.

## THE LAND OF NOWHERE.

Do you know where the summer blooms all the year round,  
Where there never is rain on a picnic day,  
Where the thornless rose in its beauty grows,  
And little boys are never called from play?  
Oh! hey, it is far away,  
In the wonderful land of Nowhere.

Would you like to live where nobody scolds,  
Where you never are told, "It is time for bed,"  
Where you learn without trying and laugh without crying,  
Where snarls never pull when they comb your head?  
Then oh! hey! you must hie away,  
To the wonderful land of Nowhere.

If you long to dwell where you never need wait,  
Where no one is punished or made to cry,  
Where a supper of cakes is not followed by aches,  
And little folks thrive on a diet of pie—  
Then oh! hey! you must go, I say,  
To the wonderful land of Nowhere.

You must drift down the river of Idle Dreams,  
Close to the border of No-man's Land;  
For a year and a day you must sail away,  
And then you will come to an unknown strand,  
And ho! hey! if you get there—stay  
In the wonderful land of Nowhere.

—ELLA WHEELER.

## HOW FATHER CURED HIS HORSE.

"Well," said Reuben, the story teller, "father always wanted a horse, because the folks in Greene lived scattered, and he had so far to go to attend funerals and weddings and visit schools, you

"George," said the man.  
"Well, father brought him home, and we boys were pleased, and we fixed a place for him in the barn, and curried him down, and fed him well; and father said, 'Talk to him, boys, and let him know you feel friendly.'

"So we coaxed and petted him, and the next morning father harnessed him and got into the waggon to go. But George wouldn't stir a step. Father got out and patted him, and we brought him apples and clover tops; and once in a while father would say, 'Get up, George,' but he didn't strike the horse a blow. By-and-bye, he says: 'This is going to take time. Well, well, George, we'll see which has got the most patience, you or I.' So he sat in the waggon and took out his skeletons."

"Skeletons?" said Poppet, inquiringly.

"Of sermons, you know. Ministers always carry around a little book to put things into they think of when they are out walking or riding, or hoeing in the garden.

"Well, father sat full two hours before the horse was ready to start; but when he did there was no more trouble for that day. The next morning 'twas the same thing over again, only George gave in a little sooner. All the while it seemed as if father couldn't do enough for the horse. He was round the stable feeding him and fussing over him, and talking to him in his pleas-

against his shoulder and told him, as plain as a horse could speak, that he was sorry. He's tried to make it up with father ever since for the trouble he made him. When he's loose in the pasture father has only to stand at the bars and call his name, and he walks up as quiet as an old sheep. Why, I've seen him back himself between the shafts of the waggon many a time to save father trouble. Father wouldn't take \$200 for the horse to-day. He eats anything you give him. Sis very often brings out some of her dinner to him."

"He likes to eat out of a plate," said Dove, "it makes him think he's folks."

## A COURAGEOUS ROBIN.

The robin is a very plucky and persevering bird. There is a story of a robin who would keep flying into a room which was used "as a bird stuffing apartment." The man who owned the apartment didn't want the robin there at all, but though he kept turning him out, the robin kept coming in again. At last he thought that to fairly frighten him away he would set up in the window some fierce-looking stuffed beasts that had been given to him. But the robin didn't mind it a bit, and as if to show that he was not to be scared in that way, he made his nest in the head of a stuffed shark that hung from the wall. We have read a pretty anecdote about a robin



MEETING OF WELLINGTON AND BLÜCHER AFTER THE BATTLE OF WATERLOO.

know, but he never felt as if he could afford to buy one. But one day he was coming afoot from Hildreth and a stranger asked him to ride.

"Father said: 'That's a handsome horse you're driving. I should like to own such a horse myself.'

"What will you give for him?" said the man.

"Do you want to sell?" says father.

"Yes, I do; and I'll sell cheap, too," says he.

"Oh, well," says father, "it's no use talking, for I haven't the money to buy with."

"Make an offer," said he.

"Well, just to put an end to the talk," father says, "I'll give you \$75 for the horse."

"You may have him," says the man, as quick as a flash, "but you'll repent of your bargain in a week."

"Why, what ails the horse?" says father.

"Ails him? He's got the Old Nick in him, that's what ails him," says he. "If he has a will to go he'll go, but if he takes a notion to stop, all creation can't start him. I've stood and beat that horse till the sweat ran off me in streams; I've fired a gun close to his ears; I've burned shavings under him. I might have beaten him to death, or roasted him alive before he'd have budged an inch."

"I'll take the horse," says father. "What's his name?"

ant, gentle way; and the third morning, when he had fed and curried him and harnessed him with his own hands, somehow there was a different look in the horse's eyes. But when father was ready to go George put his feet together and laid his ears back and wouldn't stir. Well, Dove was playing about the yard, and she brought her stool and climbed up by the horse's head.

"Dove, tell what you said to Georgie that morning."

"I gave him a talking-to," said the little girl. "I told him it was perfectly 'diculous for him to act so; that he'd come to a real good place to live, where everybody helped everybody; that he was a minister's horse, and God would not love him if he was not a good horse. That's what I told him, and then I kissed him on the nose."

"And what did George do?"

"Why, he heard every word I said; and when I got through he felt so 'shamed of himself he couldn't hold up his head; so he just dropped it till it almost touched the ground, and he looked as sheepish as if he had been stealing a hundred sheep."

"Yes," says Reuben, "and when father told him to go, he walked off like a shot. He has never made any trouble since. That's the way father cured a baulky horse. And that night when he was unharnessing he rubbed his head

who defended his home in a very brave way from a big Angora cat. The robin had chosen for its nesting-place a thick clump of ivy that hung over the garden wall, partly covering the roof of an outhouse. All at once the bird was heard making a great noise; some of his notes were like moans of distress, others were just angry twitters. The reason was soon plain to be seen. Enjoying the sunshine on the roof, not very far from the ivy, lay the large and formidable-looking cat. The bird was fussing about on the edge of the roof, literally trying to frighten his terrible enemy away, jerking his little body, as though almost ready to attack the clawed monster, who must to him have seemed a very dragon, and hopping nearer and yet nearer, making as much noise and commotion as he possibly could. At last either the cat was tired of sunning himself, or else he found the noise disagreeable, for it is certain he did really go away indoors, leaving the poor brave little bird master of the situation.

SAID I to little brother Howard: "There, your toes are out of your stockings again; seems to me they wear out in a hurry." Giving a comical leer, he said:

Do you know why stockings wear out first at the toes?" "No." "Because toes wiggle, and heels don't."



SCIENTIFIC AND USEFUL.

COFFEE CAKE. One cup molasses, one half cup sugar, three cups flour, one-half cup butter, one cup cold strong coffee, two cups raisins, two eggs, one tablespoonful of saleratus. Spice to suit the taste.

THE CAKE PAR EXCELLENCE now is a layer cake with chocolate and coconut mixed together and put between the layers. I prepare the chocolate after any of the well known methods, and add the grated coconut to it. No one can think, who had not tasted it, what a delectable morsel it is.

THE CHOLERA.—Possibly the Cholera may not reach our locality this season. Nevertheless, we should take every precaution against it. Dr. Fowler's Extract of Wild Strawberry is a sure cure for Cholera Morbus, Colic, Cramp, Diarrhoea and Dysentery.

OTHER odoriferous waters undergo many variations of aroma as they fade into insipidity, but Murray A. Lannan's Florida water passes through no such gradations. As it is when sprinkled upon the handkerchief or the garment, so it remains—delicate, refreshing, and delightful to the last.

A STRANGE DISEASE.—There is scarcely a symptom belonging to chronic complaints but that is common to the poor dyspeptic, and he often feels as if he had every disease in the catalogue. Burdock Blood Bitters cures the worst form of Chronic Dyspepsia.

A COMMON fruit and spice cake is made of one cup of butter, two cups of sugar; beat these to a cream, then add two well beaten eggs, the white and yolk beaten together, a large handful of currants, a quarter of a pound of citron cut in small bits, one teaspoonful each of grated nutmeg, of cinnamon, and of cloves, half a cup of sour milk with a quarter of a teaspoonful of soda dissolved in it, and three cups of flour. This cake requires nearly an hour for baking, in a moderate oven.

KEEP YOUR HOUSE GUARDED.—Keep your house guarded against sudden attacks of Colic, Cramps, Diarrhoea, Dysentery and Cholera Infantum. They are liable to come when least expected. The safest, best and most reliable remedy is Dr. Fowler's Extract of Wild Strawberry.

TEA CAKE.—Two tea-cups of sugar, one teaspoonful of butter, one teaspoonful and a half of milk, and two eggs; dissolve half a tea spoonful of soda in milk, and mix enough flour with these ingredients to make a paste that will roll handsily; cut out with a biscuit cutter, and bake.

SHOULD BE ATTENDED TO.—Much suffering is the result of neglected constipation. There is no better regulator of the bowels than Burdock Blood Bitters. By its prompt action on the Liver all tendency to irregularity is removed, and one chief source of ill-health prevented.

TO STIFFEN AND GLAZE COLLARS, &c.—Melt a lump of borax in half a wineglass of hot water, mix it in cold white starch; have the things dry before starching them; then starch well once only. Place the collars and cuffs singly in a towel with a fold of it between each row. Roll up each shirt tightly have a boxton ready, and iron at once very quickly. The heater should be red hot, and if kept moving quickly will not scorch. Each article as finished to be placed close to the fire. The cuffs and collars are best on a tray, and it is placing the shirts, &c., close to the fire stiffens them; the borax gives the glaze.

AS OLD FAVORITE. An old favourite, that has been popular with the people for nearly 30 years, is Dr. Fowler's Extract of Wild Strawberry for all varieties of Summer Complaints of children and adults. It seldom or ever fails to cure Cholera Morbus, Diarrhoea, and Dysentery.

GLAZING.—To make a small quantity for a *bonne feu* for an invalid, take three sheets, or one oz., dissolve in one pint of warm water. When it is thoroughly dissolved bring it to a boil a bling one-half cup of sugar, the juice of a lemon, and the white of an egg. Beat it well, and put on ice. Remember, a tablespoonful served in a dainty dish may persuade your patient to ask for more, but a bowlful will never accomplish that purpose. The eyes of invalids some times seem to act as stomachs to digest the force the mouth receives.

FRIGASSE CHICKENS.—Wash the chicken thoroughly and cut it up; put into a pot and cover with cold water. Let it stew until tender. When done, have ready a thickening of cream or milk and flour and stir it into the stew. Add butter, pepper, and salt. In the meantime have a nice short cake, rolled as thin as possible, taked and cut into squares. Lay the cakes on a large platter and pour the chicken and gravy over them.

THOUSANDS GIVEN AWAY EVERY NEW SUBSCRIBER gets a Present valued from 35c. to \$500. and no favoritism shown. AMERICAN RURAL HOME, ROCHESTER, N.Y. IF NOT AS REPRESENTED THE THIS Unrequited Advertising Method is guaranteed to be free from even suspicion of rick or double dealing. It is straight business. Send \$1.00 and your name goes on the books, and your present will be forwarded. Write for Sample Copy with List of Presents. Everything goes WITHOUT RESERVATION.

TO THE PUBLIC. Rochester, N.Y., Mar. 21, 1885. I am acquainted with the publishers of the AMERICAN RURAL HOME, and believe they will fulfil every guarantee they make to the public. Cornelius R. Parsons (Mayor of Rochester for many years past.)

Burdock BLOOD BITTERS Cures Dizziness, Loss of Appetite, Indigestion, Biliousness, Dyspepsia, Jaundice, Affections of the Liver and Kidneys, Eruptions, Blotches, Warts, Humors, Salt Rheum, Scrofula, Erysipelas, and all diseases arising from Impure Blood, Deranged Stomach, or irregular action of the Bowels.

Listen to Your Wife. The Manchester Guardian, June 8th, 1883, says: At one of the "Windows" Looking on the woodland ways! With clumps of rhododendrons and great masses of May blossoms! "There was an interesting group. It included one who had been a "Cotton spinner," but was now so "Paralyzed" That he could only bear to lie in a reclining position. This refers to my case. I was Attacked twelve years ago with "Locomotor Ataxy." (A paralytic disease of nerve fibres rarely ever cured) and was for several years largely able to get about, and for the last five years not able to attend to my business, although many things have been done for me, the treatment being Nerve stretching. Two years ago I was voted into the Hospital for incurables? Near Manchester, in May, 1882. I am now "Admirable." For anything in the shape of patient "Medicines" And made many objections to my dear wife's constant tending to try Hop Bitters, but finally to pacify her—Consented! I had not quite finished the first bottle when I felt a change come over me. This was Saturday, November 3rd On Sunday morning I felt so strong I said to my room companions, "I was sure I could "Walk!" So started across the floor and back. I hardly knew how to contain myself. I was all over the house. I am gaining strength each day, and can walk quite safe without any "Stick!" Or support. I am now at my own house, and hope soon to be able to earn my own living again. I have been a member of the Manchester "Rural Exchange" For nearly thirty years, and was most heartily congratulated on going into the room on Thursday last. Very gratefully yours, JOHN BLACKBURN. MANCHESTER (ENG.) Dec. 24, 1883. Two years later am perfectly well.

HOW TO REACH THE REMOVED OF COLORADO. Colorado has become famous for its marvellous gold and silver production, for its picturesque scenery, and its delightful climate. Its mining towns and camps, its massive mountains, with their beautiful green-wooded valleys, lofty snow-capped peaks and awe-inspiring canyons, together with its hot and cold mineral springs and baths, and its healthful climate, are attracting, in greater numbers each year, tourists, invalids, pleasure and business-seekers from all parts of the world. At each of the prominent Colorado resorts are spacious hotels so completely appointed that every appreciable comfort and luxury are bestowed upon their patrons. The journey, from Chicago, Peoria or St. Louis to Denver (the great distributing point for Colorado), if made over the Burlington Route (C. & Q. R. R.), will be as pleasant and gratifying as it is possible for a railroad trip to be. It is the only line with its own track between the Great Lakes and the Rocky Mountains, and the only line running every day in the year through trains between Chicago, Peoria (or St. Louis) and Denver. It also runs through daily trains between Kansas City and Denver. These through trains are elegantly equipped with all the modern improvements, and ride you over a track that is as smooth and safe as a perfect roadbed, steel rails, iron bridges, interlocking switches and other devices, constructed in the most skillful and scientific manner, can make it. At all coupon ticket offices in the United States and Canada will be found on sale, during the tourist season, round-trip tickets, via this popular route, at low rates to Denver, Colorado Springs, and Pueblo, Colorado. When ready to start, call on your home ticket agent or address Percival Lowell, General Passenger Agent, Burlington Route, Chicago, Ill.

CONSUMPTION CURED. An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh of the Throat and Lung Affections, also of Nephritis and all Nervous and Aggravated forms of Nervous Debility and all Nervous complaints, after having tested its wonderful efficacy upon thousands of cases, has felt it his duty to make it known to his suffering fellow-men. Actuated by this noble and selfless desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using, sent by mail, by addressing with stamp the following paper, A. WELLS, 217 Power Block, Rochester, N. Y.

ALL WELLS PLEASED.—The children like Dr. Lewis' Pleasant Worm Syrup and parents rejoice over its virtues.

WELLS, RICHARDSON & CO'S IMPROVED BUTTER COLOR USED BY THOUSANDS OF THE FINEST CREAMERIES AND DAIRIES BECAUSE IT IS THE PUREST, THE BRIGHTEST, AND THE BEST. IT WILL NOT CHANGE COLOR THE BUTTERMILK OR TURN RANGY. IT CONTAINS NO ACID OR ALKALI. IT IS NOT OUR OLD COLOR, BUT A NEW ONE SO PREPARED IN SUCH A MANNER THAT IT DOES NOT CHANGE. IT IS THE PUREST OF ALL BUTTER COLORS, AND DOES NOT CHANGE THE COLOR OF THE BUTTER. It is made by the process of the "Wells, Richardson & Co. Color" and is the best of all. To supply you with it, write how to get it, write Wells, Richardson & Co., 127 Broadway, New York, or 127 West Street, New York. Dealers: Messrs. G. & J. C. Groves, 127 West Street, New York.

WALKS ABOUT ZION. BY REV. JOS. ELLIOT. 42 pages. Cloth, 50 cents; in paper 30 cents. Mailed to any address, free of postage, on receipt of price. "Among good books for devotional or practical religious use we may mention with commendation 'Walks about Zion,' a series of 12, interesting and practical addresses on religious topics."—New York Independent. "Clear in thought, correct in expression, and cogent in argument and appeal."—The Christian Chronicle. "These addresses are well pointed, eminently practical. Mr. Elliot is well known by the community as an accomplished exponent of the Word of God, and with the gift of saying much in little, much meaning in few words. This is the characteristic of these addresses which we most cordially recommend to the thoughtful reader. We confess to be reminded by these brief and simple discourses of our dear old favourite, John Foster.—Evangelical Alliance (Hull) Witness. Usual Discount to the Trade. C. BLACKETT ROBINSON, 5 Toronto Street Toronto. Publisher.

VOICES FROM THE ORIENT. BY THE REV. GEORGE BURNFIELD, B.D. "It is unquestionably an acquisition to Biblical literature. The book is written in a very pleasing style."—Prof. J. H. Burleigh. "The book is both interesting and instructive."—Globe. "The book is written in a very pleasant manner. Its contents are valuable."—The Mail. "The interest grows with the progress of the narrative. The writer is a keen and intelligent observer of men and things in the course of his Oriental wanderings."—Canada Presbyterian. "We cordially recommend the work to our readers, as one both interesting and instructive."—London Advertiser. "Voices From the Orient" deserves a wide circulation, not only in Canada, but in all Christian countries."—Hamilton Times.

Thin, Pale-Faced Ladies. For 30 cents we will send you 3 1/2 lbs. what will be a very short time DRUPELOPE THE CHICKEN, making them PLUMP AND ROYAL, and fill out the NECK. Never fails. No medicine. MCKAY BUREAU, 122 Queen Street East, Toronto, or full particulars sent for 3 cent stamp. FRANK WILSON'S PATENT Grinding Mills are a complete success for crushing Oyster Shells, grinding Bone Meal and all kinds of Grain, also grinding Corn and Cob. A peck of shells can be crushed in fifteen minutes. They are made in the very best manner, and will last for years. They can be adjusted for grinding either coarse or fine. Whole Oyster Shells can be put in the Mill, as well as bones of the same size. Every Poultryman should have one. Price \$7.00, price, with legs, \$9.00. Circulars and full particulars on application to W. H. BARNARD, Toronto, Ont.

MISCELLANEOUS.

"WHAT is an epistle?" asked a Sunday-school teacher of her class. "The wife of an apostle," replied the young hopeful.

A POET says, "Woman is the Sunday of man." He probably had Eve in his mind, as she was the beginning of the weak.

"MAGGIE, I don't like to see this dust on the furniture." "All right, mum, I'll shut the blinds right away."

AN engraver recently made this mistake: "Mr. and Mrs. Smith respectfully request your presents at the marriage of their daughter."

JOSEPH SHEWELL Armour, says that he considers Burdock Blood Bitters a life saving friend to him. It cured him of debility when doctors failed.

AN old Highland woman—one after the strictest sect—used to say: "None of yer modern improvements for me. I want auld David's Psalms and David's tune, too, in our kirk."

A GOOD circulation of the fluids of the body is indispensable to perfect health. The Bile, The Blood, The Secretions of the Skin, Kidneys, and Bowels are all purified by Burdock Blood Bitters.

DOCTOR: "Well, how's the baby?" Mrs. Jinks: "Oftal had, sir. Last night the poor little thing was took drettle. First she would clinch her hands, and then she would say, 'A-h-h,' just like a human being."

"I'm sum Mistah Brown, mum—gen'tleman what lives 'cross the way. He says w'n't yer please shut dema winders w'en de young lady's a-playin'?" "But I thought Mr. Brown was musical himself?" "That's what's the mattah, mum."

A WANT of Activity.—Much of the ill condition of chronic invalids is due to want of activity in a sluggish liver. Burdock Blood Bitters arouses a healthy action of the Liver to secrete pure bile, and thus make pure blood which gives perfect health.

"Well, how did you like the sermon today?" "The sermon?" "Yes, you were at church, weren't you?" "Why, yes, certainly." "Then you can tell me how you liked the sermon, I suppose. You heard it didn't you?" "Heard it? Certainly not. I belong to the choir."—Boston Courier.

BETTER THAN GOLD.—A good name, good health, a good companion and a bottle of Haggard's Yellow Oil are among the first requisites for human happiness. Yellow Oil cures Rheumatism, Sprains, Lameness, Bruises, Burns, Frost Bites, Croup, Sore Throat, and all Pain and Inflammation.

A YOUNG mother, travelling with her infant child, writes the following letter to her husband at home: "We are all doing well, and enjoying ourselves very much. We are in fine health. The boy can crawl about on all fours. Hoping that the same may be said of you, I remain," etc.

EMBARRASSED young man (who has just been presented and is trying hard to say something) "I think, Miss Bellairs, that I have had the pleasure of meeting you before." Miss B.—"It is possible, but I do not remember it."—E. P. M. "Was it not at Mount Desert?" Miss B. "I have never been there." E. P. M. "Neither have I." A painful pause follows.

DON'T SKIP THEM.

So many schemes are put before the public for the increase of newspaper circulation, which seem to be plausible and yet are fraudulent, that when a legitimate, honest effort is made to build up the circulation of a legitimate, honest paper, by legitimate, honest means, people who have been so many times duped, are very slow to respond to the genuine scheme. We are led to this train of thought by a perusal of the advertisement of THE AMERICAN RURAL HOME, of Rochester, N. Y., published in this issue of our paper, to which we call the attention of our readers. We are acquainted with both paper and publishers and take pleasure in recommending it as one of the very best farm and family journals in this country. Every person who sends one dollar for a year's subscription to the paper receives handsome present which is donated by the advertising patrons of the paper. These premiums consist of Cattle, Land, Reapers, and Mowers, Ploughs, Books, Pictures, Organs and thousands of other valuable articles. The Rural Home Co. is endorsed by Hon. Cornelius R. Parsons, Mayor of Rochester, to whom you can write if you have any doubts as to its reliability. It will pay you to send for sample copy if nothing more than to get a look at its great twelve-page, sixty column illustrated paper. Address, Rural Home Co., Limited, Rochester, N. Y.

FOUR ACTS PLAYED.

Mad Report About Ex-President Arthur.

Will the Fifth and Final Act be a Tragedy.

Rochester Democrat and Chronicle.

"Dr. Lincoln who was at the funeral of 'ex-Secretary Frelinghuysen, says ex-President Arthur looked very unwell. 'He is suffering from Bright's disease.' 'During the past year it has assumed a very aggravated form.'"

That telegram is act IV. of a drama written by ex-President Arthur's physicians. In act I he was made to appear in "Malaria" of which all the country was told when he went to Florida.

In Act II. he represented a tired man, worn down, walking the sands at Old Point Comfort and looking eastward over the Atlantic toward Europe for a longer rest.

The curtain rolls up for Act III. upon the distinguished actor affected with melancholy from bright's disease, while Act IV. discovers him with the disease "in an aggravated form, suffering intensely (which is unusual), and about to take a sea voyage."

Just such as this is the plot of many dramas by play-wrights of the medical profession. They write the first two or three acts with no conception of what their character will develop the final one.

They have not the discernment for tracing in the early, what the latter impersonations will be. Not one physician in a hundred has the adequate microscopic and chemical appliances for discovering bright's disease in its early stages, and when many do finally comprehend that their patients are dying with it, when death occurs, they will, to cover up their ignorance of it, pronounce the fatality to have been caused by ordinary ailments, whereas these ailments really results of bright's disease of which they are unconscious victims.

Beyond any doubt 80 per cent. of all deaths except from epidemics and accidents, result from diseased kidneys or livers. If the dying be distinguished and his friends too intelligent to be easily deceived, his physicians perhaps pronounce the complaint to be pericarditis, pyemia, septicemia, bronchitis, pleuritis, valvular lesions of the heart, pneumonia, etc. If the deceased be less noted, "malaria" is now the fashionable assignment of the cause of death.

But all the same, named right or named wrong, this fearful scourge gathers them in! While it prevails among persons of sedentary habits,—lawyers, clergymen, congressmen,—it also plays great havoc among farmers, day laborers and mechanics, though they do not suspect it, because their physicians keep it from them, if indeed they are able to detect it.

It sweeps thousands of women and children into untimely graves every year. The health gives way gradually, the strength is variable, the appetite sickle, the vigour gets less and less. This isn't malaria—it is the beginning of kidney disease and will end—who does not know how?

No, nature has not been remiss. Independent research has given an infallible remedy for this common disorder; but of course the bigoted physicians will not use Warner's safe cure, because it is a private affair and cuts up their practice by restoring the health of those who have been invalids for years.

The new saying of "how common bright's disease is becoming among prominent men" is getting old, and as the Englishman would say, sounds "stupid"—especially "stupid" since this disease is readily detected by the more learned men and specialists of the disease. But the "common run" of physicians, not detecting it, give the patient Epsom salts or other drugs prescribed by the old code of treatment under which their grandfathers and great-grandfathers practiced!

Now, we hear that the patient is "comfortable." But ere long, maybe, they "tap" him and take some water from him and again the "comfortable" story is told. Torture him rather than allow him to use Warner's safe cure! With such variations the doctors play upon the unfortunate until his abroad is made, when we learn that he died from heart disease, pyemia, septicemia or some other deceptive though "dignified" cause.

Ex-President Arthur's case is not singular—it is typical of every such case. "He is suffering intensely." This is not usual. Generally there is almost no suffering. He may recover, if he will act independently of his physicians. The agency named has cured thousands of persons even in the extreme stages—is to-day the mainstay of the health of hundreds of thousands. It is an unfortunate fact that physicians will not admit there is any virtue outside their own

sphere, but as each school denies virtue to all others, the people act on their own judgment and accept things by the record of merit they make.

The facts are cause for alarm, but there is abundant hope in prompt and independent action.

40 YEARS

ALLAN TURNER & CO., Druggists, Brockville, Ont., write: "We have sold WINTER'S BALM OF WILD CHERRY for forty years, and known it to be one of the oldest as well as one of the most reliable preparations in the market for the cure of Coughs, Colds, and Throat and Lung Complaints. We know of no article that gives greater satisfaction to those who use it, and do not hesitate to recommend it."

T. R. MELVILLE, Druggist, Prescott, Ont., says, "I can confidently recommend the preparation as thoroughly reliable."

F. B. CARMAN, Morrisburg, Ont., says he thinks WINTER'S BALM OF WILD CHERRY one of the best preparations in the market for the purposes intended, and takes pleasure in selling it.

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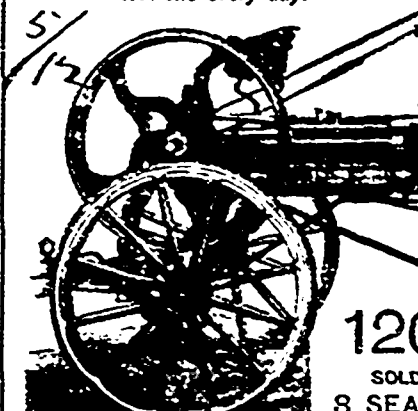
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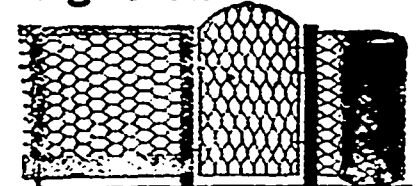
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Owing to the rapid increase of our business we find it necessary to enlarge our already extensive premises with a view to increase facilities. In consequence of this, we find it absolutely necessary to reduce our very large stock, and will therefore, during the **NEXT 30 DAYS**, offer **EXTRAORDINARY INDUCEMENTS** in every department. As we mark all our goods in plain figures, it will be easily seen what reductions we make on any line of goods. The reductions made will be for **SPOT CASH ONLY**, and no exception to the rule will be allowed.

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- Special discount off Trimmed and Untrimmed Millinery.
- Special discount off Mantles and Dolmans.

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The discount will be allowed on all amounts exceeding \$1.00, and will range from 10c. to 25c. off every dollars worth of goods purchased.

## J. M. HAMILTON,

184 YONGE STREET, THIRD STORE ABOVE QUEEN STREET, TORONTO.

### WHAT IS CATARRH?

*(From the Toronto (Canada) "Bell")*

Catarrh is a mucopurulent discharge caused by the presence and development of the vegetable parasite amoeba in the internal lining membrane of the nose. This parasite is only developed under favorable circumstances, and these are: Morbid state of the blood, as the blighted corpuscle of tubercle, the germ poison of syphilis, mercury, toxemia, from the retention of the effete matter of the skin, suppressed perspiration, badly ventilated sleeping apartments, and other poisons that are germinated in the blood. These poisons keep the internal lining membrane of the nose in a constant state of irritation, ever ready for the deposit of the seeds of these germs, which spread up the nostrils and down the fauces, or back of the throat, causing ulceration of the throat; up the Eustachian tubes, causing deafness; burrowing in the vocal cords, causing hoarseness; usurping the proper structure of the bronchial tubes, ending in pulmonary consumption and death.

Many attempts have been made to discover a cure for this distressing disease by the use of inhalants and other ingenious devices, but none of these treatments can do a particle of good until the parasites are either destroyed or removed from the mucus issue.

Some time since a well-known physician of forty years' standing, after much experimenting, succeeded in discovering the necessary combination of ingredients which never fails in absolutely and permanently eradicating this horrible disease, whether standing for one year or forty years. Those who may be suffering from the above disease should, without delay, communicate with the business managers, Messrs. A. H. DIXON & SON, 305 King Street West, Toronto, and get full particulars and treatise free by enclosing stamp.

11/12

**A New Treatment**

**FOR THE**

**RAPID PERMANENT CURE OF**

CATARRH

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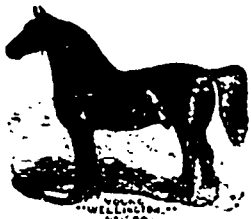
*What the Rev. E. B. Stevenson, B. A., a Clergyman of the London Conference of the Methodists Church of Canada, has to say in regard to A. H. Dixon & Son's New Treatment for Catarrh.*

Messrs. A. H. DIXON & SON,  
OAKLAND, ONTARIO, CANADA, March 17, 1883.  
Dear Sirs—Yours of the 13th inst. to hand. It seems almost too good to be true that I am cured of Catarrh, but I know that I am. I have had no return of the disease and never felt better in my life. I have tried so many things for catarrh, suffered so much and for so many years, that it is hard for me to realize that I am really better.  
I consider that mine was a very bad case. It was aggravated and chronic, involving the throat as well as the nasal passages, and I thought I would require the three treatments, but feel fully cured by the two first, and I am thankful that I was ever induced to send to you.  
You are at liberty to use this letter, stating that I have been cured at two treatments, and I shall gladly recommend your remedy to some of my friends who are sufferers.  
Yours, with many thanks,  
Rev. E. B. STEVENSON.



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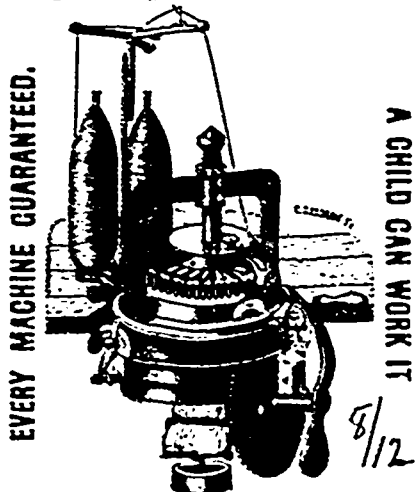
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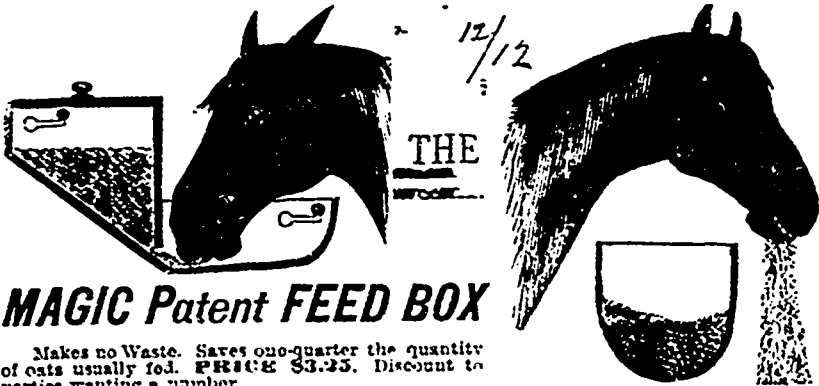
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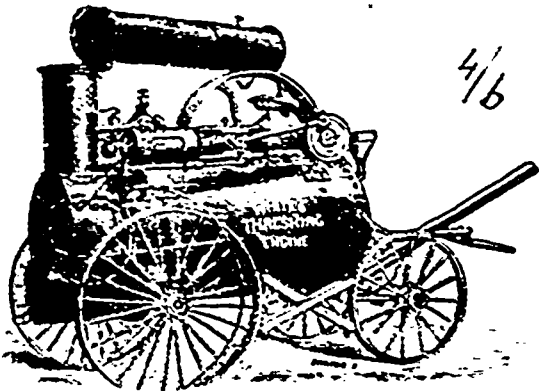
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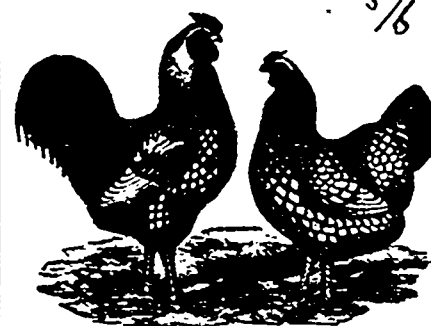
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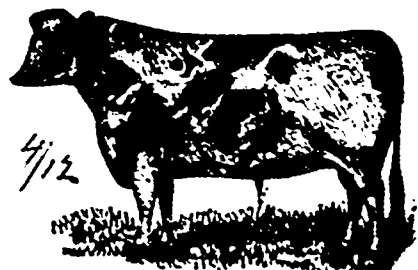
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BREEDER OF THOROUGHBRED  
**HOLSTEIN CATTLE.**

The herd consists of Four Imported Heifers and One Barrington Bull. Lady Mol has dropped a fine b. c. This Heifer took First Prize in Holland. Milk record 98 lbs. per day. Heifer Jessamine dropped c. c. This herd was imported by B. B. Lord & Son, Cincinnati, N. Y., with a view to secure only the best that could be got. Stock for sale, visitors welcome. For particulars, address as above.

2 Miles from Thornhill Station,  
W. & N.-W. R. R.