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### RURAL NOTES.

A "FARMER" writes: It is a singular fact that such mild weather as we have had of late has encouraged the frogs to make their voices to be heard as if the spring had been approaching instead of winter. I never noticed this before during a period of twenty-five years' residence in the country.

It is likely that there will be a good average production of pork for home consumption this year, notwithstanding the large sale of store hogs. The "new generation," of which no account appears to have been taken in the spring, is being got ready for the market, and by the end of the year the lovers of pork may get their fill of it.

Our readers are respectfully asked to help in extending the circulation of the RURAL CANADIAN. Ask your neighbours to take it for the coming year. Anyone taking your advice will thank you for the hint, as the information gleaned from its pages will many times repay the small cost of subscription. Single subscriptions, \$1; in clubs of five or over, 75 cents each. Push the canvass now: balance of year free to new subscribers.

FARMERS are just now busily at work gathering their crops of carrots and mangolds. As these roots go deep into the soil, it is found to be no easy matter to lift them, the ground being unusually hard and dry for this season of the year. For the next two or three weeks the turnip fields will be the centre of operations, and should the present weather continue, a large crop of roots will be housed in fine condition. There is a good time coming for the live stock.

In some sections of Ontario farmers only finished the seeding of fall wheat last week. The late harvest delayed a commencement by fully two weeks, and owing to the absence of rain, the ground was hard to work. Stubble and pea-ground could scarcely be ploughed at all, and unfortunately a very large proportion of this kind of tillage prevails in the country. We want more summer-fallowing, cultivating, and underdraining to make the growing of fall wheat profitable.

The Belleville *Intelligencer* very properly says: "Is it not about time that people began to treat the predictions of the so-called weather prophets with the contempt which they deserve? By such means only can the public save themselves from being bored by the prognostications of men who are no wiser than their fellows as to the future. Take, for instance, Mr. Vennor's prediction for October. He prophesied a very severe month of rain, hail and snow, and as everybody knows Oc-

tober has been the finest month of the year. By all means let the weather prophets subside."

SOME farmers, remarks the *Hamilton Times*, are keeping back their potatoes, expecting better prices. They were never further mistaken. The New York and Boston markets are glutted, the crops throughout the country are enormous, and there will be no demand in the States this year for Canadian potatoes. When contractors undertake to supply the esculents for the year's requirements of the London Fire Brigade at 48 cents a bushel, high prices in this locality, at all events, cannot be expected.

THE delightful autumn weather this year has been most favourable for the ripening of corn, buckwheat, and other late crops. Owing to the cold and wet weather of June, corn on all low and undrained grounds got a very late start, and even as late as the first of August farmers had little hopes of an average crop. But throughout August and September it grew well and ripened evenly, and indeed there are but few districts in Ontario where frost did any injury to vegetation before the middle of October. There will be a good supply of corn in farmers' hands for fattening cattle and hogs, especially in the corn-growing districts.

THERE is a great slackness in the movement of wheat. Prices are so low that few farmers sell, saving those who are compelled to do so by circumstances. Nor is there any probability of the market improving for some time, for, what very rarely happens, good harvests have been reaped this year the world over. If farmers can manage to hold on until the supplies on hand run low, there is a chance for a rise, or they may hold on in anticipation of a poor crop next year. It is quite likely, indeed, that half the surplus product of wheat in Ontario will be found in farmers' hands next spring. Although a large breadth has been sown this fall, the crop is far from being a promising one.

In what is familiarly known as the barley-growing section of Ontario—north and a little west of the Bay of Quinte—that grain was harvested this year in fine condition. It is not as plump as in some former years, in consequence of a local drouth in June and July, but the colour is generally all that the brewers of pale ales could desire. In many other districts, however, and especially throughout the western peninsula, the great bulk of the grain was discoloured by rains at the harvesting season, and the price being low very little is going to market. The probability is, indeed, that farmers will feed it to their cattle. This will pay them far better than to sell it for 40c. or 50c. per bushel. It is just as good for feeding purposes as grain of the brightest colour, and

in the items of manure, beef farmers will find that they are handsomely rewarded by consuming the barley at home.

NEATNESS in farming is an important matter. The planting of trees, keeping fields free from weeds, painting buildings, and keeping fences in good repair, add very materially to the value of farm property. In a recent drive through a portion of York County, we had an opportunity of seeing various kinds of farming—largely, we are pleased to say, of the right kind. Still there is room for improvement. When shall we be able to say that every farm is well tilled, fences carefully kept up, and buildings nicely painted? One farm visited during our drive—that belonging to Mr. Wm. Rennie, seedsman, of this city, deserves special mention. It is in many respects a "model farm." Trees have been planted along the roadside and up the avenue to the dwelling-house, no weeds are allowed to multiply; and everywhere there is evidence of thrift, experience and intelligent, well-directed efforts. The result is pleasing to the onlooker, as well as profitable to the owner. Neatness and skill in farming pays.

THE seventh annual dairy show at Islington, London, was very successful. The object of the British Dairy Farmers' Association is to improve the dairy stock and to encourage a larger and more general production of butter, cheese and eggs. The rearing of poultry, geese, ducks, turkeys, and pigeons is also one of the aims of the association. It is extremely probable that the British farmer will turn his attention more and more from the production of cereals to dairy farming. The high prices which prevail in America are already injuring exports to England, and there has recently been a considerable decrease in the exports of meat and cheese. It has often been stated that England cannot compete with other countries in the production of cheap poultry, but certain experiments, which have been made of late, prove this assumption to be incorrect. For instance, at Aylesbury, Buckinghamshire, large numbers of ducklings have been reared, and have proved highly remunerative. The importance of this show cannot be overrated. Three million gallons of milk are daily produced in Great Britain for human consumption. Of this quantity two-thirds are converted into cheese and butter. Attention to the methods of producing and manufacturing is, therefore, a matter of prime importance, and dairy utensils of all sorts formed an interesting portion of the display. As an inducement to the general public to visit the show, there were contests of cheese and butter making, also a milkmaid contest. The advocates of goat breeding were well represented, and seventy-four animals fought for the prizes. The show was in every way a success.

## FARM AND FIELD.

## AN AUTUMN RAMBLE.

A delightful day! Not a day odorous with flowers and new-mown hay, but one of those rare Indian summer days when the woods stand transfigured in the mellow light. Come, let us have a ramble. This city life of ours is monotonous at best, and the country will at least have the charm of novelty. But you do not care for the woods? No matter; you cannot help admiring them now. Come, I will try to point out their beauties.

Observe that maple! How pleasantly the sunshine ripples through its foliage!

The creek is a very talkative companion. It is seldom quiet, and never dull. Its current is more copious than I had thought, doubtless owing to the late rains. The great blocks of sandstone in its bed are smoothly polished, and the impetuous current rubs away at them unceasingly, foaming and bubbling as it breaks against them.

See this pine! Isn't it a giant? He must be lonely here by the roadside, with no company but puny saplings. It is singular that the lumbermen have spared his trunk. How tall he is! Rub your bump of calculation and give a guess at his height. One hundred feet! Not less surely; doubtless considerably more. His trunk is straight as an arrow—a magnificent shaft. Throw a stone over him! Indeed you cannot, friend of mine. Try it, if you will; I'll be your judge. Hardly half way up, honestly. See the branches up there quivering. The old giant is laughing at you.

Now the valley opens out. Yonder is a farmhouse, while there is a saw mill with its unsightly dam—far from picturesque objects. But notice the old bridge—a tumble-down, half-ruined structure that would adorn a sketch of woodland scenery. Look now beyond house and mill and bridge. Was ever hill more gorgeous than that one? What autumnal colours could be brighter than those oaks, dog woods, hickories and beeches? Off here to the left, through that pine-walled gap, notice that distant hill with the blue haze above it. What richer or lovelier tints could an artist desire?

See this pine thicket. It is twilight in there, even in the brightest sunlight. There goes a squirrel!—a piny, the boys would call him, to distinguish him from the gray squirrel. Hear him chatter! He thinks we have no business here no doubt; but we will call in and see what kind of a housekeeper he is, for this seems to be his home. There, he has vanished without a word of welcome. How quiet and dark it is! These brown pine needles make a capital turf to walk on, but they choke out the grass, even if the scanty light would permit of such growth. This is something akin to the "dim religious light" one reads of in the old cathedrals of Europe. There is a sombreness about the place that produces weird fancies. Pine woods have always been prolific of legends. Unlike oak or maple woods, they have little affinity for sunshine.

We have had quite a long walk, and it is almost lunch time. I see a glade across the creek, that would be an excellent place to lunch in. But how shall we cross? Really I had not thought of that. The bridge is a mile away, and the creek is deep and rapid. Ah, I have it! There are two big sandstone boulders in the stream, not a dozen feet apart, and here is a rail fence. Are we engineers enough to build a bridge, provided the owner of the fence didn't discover us? Certainly. There, two rails are safely laid. Not strong enough yet. Two more. That will do, I think.

Even a prosy fellow like yourself must acknowledge that this is a pretty spot. Here are rhododendrons, with green and lustrous leaves that remind one of spring; there are little pines grouped as if planted by hand, and back of us is a thicket of yellow-leaved bushes that I am not botanist enough to call by name—all inclosing a glade made pleasant by the mild October sunshine. Here is a dry log to sit on, and now for lunch.

Hear the bird singing! Its voice is not musical, but in keeping with the wild woods it lives in. I think it is a jay. The robins, bluebirds, and catbirds have all gone southward, and it will soon follow. The blackbirds are holding a caucus yonder on the hillside, doubtless deliberating about their removal. What harsh voices they have! They are nearly related to the crow, I believe—a natural thief and vagabond. By the way, there goes a crow now off that chestnut tree—a lazy-winged fellow, with a most melancholy caw.

Little else is stirring in the woods but birds. Perhaps a squirrel springs into vision at long intervals, or a rabbit darts out of some thicket; but silence reigns among the trees. It is a silence broken by many sounds, all so in harmony with it that it remains undisturbed. Leaves drop ceaselessly—red, yellow, green—rustling against the branches as they fall. There goes a golden hickory leaf into our lunch basket. It must have sailed quite a distance, for I can see no hickory tree near us. A puff of wind sometimes blows off a flurry of leaves, scattering them in all directions, to seek erratic courses to the ground.

What can this be? Surely not a flower! Yes; a violet growing in this nook by the roadside, and November almost here! A beautiful little flower, isn't it?—too delicate for these wild woods. I shall take it home with me, root and all, to keep Jack Frost from nipping it.

These aimless wanderings through autumn woods have a strange charm for me. They take me out of my selfish life, and exert a refining influence. It is like wandering in dreamland, save that one sees nothing distorted or unnatural but beauty of a simple and fascinating type. No poetry is sweeter than that of Indian summer, but few of our poets have yet succeeded in giving it adequate expression.

Beautiful! You exclaim, and I echo the word, pleased at this evidence of your appreciation.

Our walk has taken us some hours from business; but I do not regard it as time lost. We have spent a short season with Nature, in one of her most delightful moods. If she has taught us nothing of practical use in our business life, she has at least left pleasant impressions of her beauties that will linger with us in the winter, and lifted us for an hour or two out of the monotony and worriment of our every-day existence.—*The Workman.*

## LUCERNE.

ITS REMARKABLE MERITS AND THE REASONS FOR ITS NEGLECT.

Lucerne is the *Medicago sativa* of the botanists, a leguminous plant that has been known and cultivated for forage from the earliest historical times. This plant was introduced from Media, in Asia, to Greece, in the time of Darius, 500 years before Christ, and from thence its cultivation extended to Italy and to the south of France, where it has been grown to this day, having always continued to be a favourite forage crop. Through the Spaniards, probably, it was early introduced into Mexico and South America, where, under the name of alfalfa, it has flourished with great luxuriance on soils suitable to its growth, spreading spontaneously, and proving of

immense value for the vast herds of cattle and horses that roam over the pampas.

Such is a general statement of the characteristics of Lucerne, and it is evident that it must be regarded as one of the most important perennial plants that cover the surface of the earth. It has never become a universal favourite in this country for several reasons. One is that it will not endure so severe a climate as red clover, requiring greater heat, while it is not adapted to quite so wide a range of soils, but perhaps the chief reason is that our farmers will not give it the minute care and attention it requires to start it properly. They don't like the idea of having to cultivate and weed a forage crop. In common parlance it would be ranked among the grasses, and the idea of weeding and cultivating a grass with all the nicety of a garden crop, seems absurd to the average farmer when he can get his respectable crop of clover with even the most slovenly treatment.

Lucerne is exacting in its requirements. It must have a deep soil and will never succeed in a thin one. It languishes in compact and clay soils, and cannot flourish on light soils, lying over impermeable subsoil. In loose and permeable subsoils of loam, sand or gravel, its roots penetrate to great depths. They have been found in sandy soils thirteen feet long. They are nearly destitute of lateral shoots, but have numerous fibrous rootlets which imbibe the moisture needed to sustain the plant from great depths. Its nutriment comes from layers of soil far below the average of other plants. Hence its wonderful adaptation to tropical climates and to long continued drouths. I have seen it flourishing in California and in Utah where it had not received a drop of rain for many months.

From what has been said, the soil most suitable for Lucerne is a deep, rich, mellow loam with a light subsoil. This latter is of the utmost consequence. Deep tillage and especial care to break through an underlying hard pan will do something, to be sure, but a neglect of this precaution, wherever a hard pan exists, will lead to inevitable failure. A calcareous soil, or a sandy soil lying over a loose calcareous subsoil, may be regarded as the best for lucerne or alfalfa. Growers of this crop in England and the south of France, sow it in drills, and hoe it often enough to keep out weeds, that is, to keep it perfectly clean for the first year or two, or till it covers the ground. This is essential to the highest success. But the chief difficulty is in getting it started well. It does not come to its perfection till the third year, and then it is superb, if the soil is suitable for it, and after it is well started, it will last for many years. It may be counted on for twenty or twenty-five years, and will furnish several cuttings each year, beginning early in May, and furnishing a crop once in about thirty days.

In one case eleven acres kept eleven horses 299 days. In another case eight acres kept eight horses 815 days, and in both cases a large number of sheep were pastured on the ground for a long time after the last cutting for the horses. It is greatly relished by all kinds of stock, especially for cows where the milk is sold in the market, but is not thought the best food for butter-making. Sow twenty pounds of seed to the acre. If the seed is pure that is sufficient, but as much of the seed is impure and old, it is safer to use twenty-five pounds. The seed is usually covered with a hard coating, and if it happens to be very dry it retards vegetation, so that it is better to steep it in warm water for six or eight hours before sowing. We should be glad to record a thoroughly successful experiment with this crop. It is worth an effort to grow it in the best manner.—*Hon. C. L. Flint in N. Y. Tribune.*

**GARDEN AND ORCHARD.**

**INSECTS INJURIOUS TO THE PEACH.**

The peach appears to have only one special enemy, the Peach Borer (*Aegeria exitiosa*), see Fig 57, described as follows:—

"The Peach Borer is a wasp-like insect, with transparent wings, and a richly ornamented body, banded and striped with gold, which deposits its eggs about the base of the trunk. The eggs hatch out, and the larvæ bore into the sapwood, and cause an exudation of gummy matter which appears in masses about the base of the tree. The larvæ seem partly to live in this gummy substance and partly in the sapwood of the tree. Sometimes three or four are found on the same tree, occasionally girdling and destroying it, but always inducing more or less of a diseased condition, and impairing its vigour. Altogether it is a very objectionable and destructive insect."

As to the means of combatting the operations of this pest it is remarked:—

"It is usual on the appearance of these gummy masses to cut them away, trace out the larva and destroy it. By watchfulness in this way its depredations may be stopped. It has been suggested that banking up the trees with earth would prevent the insects from depositing their eggs, and the method is very strongly recommended by those who have tried it. As a rule those who look after their peach trees closely have not much trouble with the Borer. It is easily discovered by this gummy exudation, and can be easily taken out and destroyed if it is looked after at the proper season."

**INSECTS INJURIOUS TO SMALL FRUITS.**

Coming next to the insects injurious to the smaller fruits, the Imported Sawfly (*Nematus ventricosus*), see Figs. 58, 59 and 60, is one of the most troublesome to the currant and gooseberry. It appeared some years ago in New York State and spread thence to Canada. It is described as follows:—

"The parent insect is a small transparent-winged fly about the size of the ordinary house-fly, but furnished with four wings. This fly makes its appearance very early in the season, and as the young foliage is expanding, deposits its eggs usually along the leaves of the gooseberry, in regular rows on the under side.

"The eggs are set end to end, and are fastened by some glutinous substance. In a few days these eggs hatch out little grubs, which proceed to eat holes in the leaves. On turning the leaves up you will find the young colony of larvæ very numerous, and you can sometimes destroy the whole brood by picking two or three of the leaves and trampling them under foot. If not checked at that time they soon scatter over the bush, and you find the foliage disappearing with great rapidity, first from the lower portion of the bush, and from that upwards, until in a very brief space the whole of the foliage of the bush, or nearly the whole of it, may be destroyed, leaving the branches bare."

"The insect," says Mr. Saunders, "is at least double-brooded, and it is sometimes supposed to have more than two broods. If it is only double-brooded, the broods appear at different periods, so that you can almost at any time during the season find larvæ on the bushes in different stages of development. You will find the larvæ most abundant in the early part of the season, devouring the foliage as soon as it is thoroughly developed, and, when full grown, going to the surface of the ground, where they construct their cocoons among rubbish or decaying leaves, coming out early in the summer and depositing their eggs for a later brood."

For this insect and the native sawfly, which is so scarce as to be of little annoyance, hellebore is a sufficient remedy.—*Report of the Ontario Agricultural Commission.*

**WINTERING FLOWERING PLANTS.**

There is no vocation in life which calls for a greater amount of forethought than that of the

gardener. Although as we write our eyes rest upon beds of stately foliage plants, brilliant verbenas, and long lines of showy annuals, we are prone to remember that in a few weeks more at the most another season of buds and blossoms will be numbered with the past. Those glorious summer days, wherein we delight to hear the joyous hum of the busy bees, or the humorous

THE PEACH BORER—*Aegeria exitiosa*.



Fig. 57.

In Fig. 57, 1 shows the female insect, and 2 the male.

THE SAW FLY—*Nematus ventricosus*.

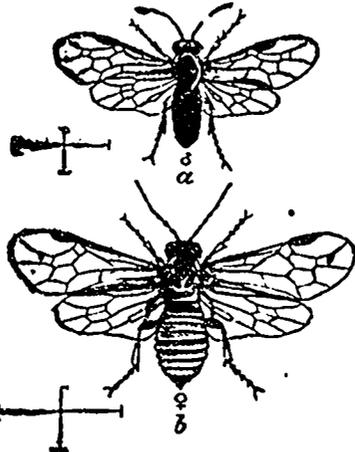


Fig. 58.

In Fig. 58 we have represented both male and female flies —a the male, b the female.

EGGS OF THE SAW FLY.



Fig. 59.

LARVA OF SAW FLY—NEARLY FULL-GROWN—FEEDING.



Fig. 60.

jokes of the farm labourers as they bind the golden grain, must in the course of the ever-changing seasons be succeeded by the long dreary winter. We who love the beautiful flowers which the hand of God has caused to spring up everywhere to adorn His footstool, desire them not only in the summer but every day of the year, and it is surprising what a little forethought will do in securing plants for winter blooming. If we would have our homes look bright and cheerful

we must now see that the preparatory steps are taken.

I will mention a few plants which may be raised from seed suitable for winter blooming. Seed may be sown in September in a shady cool place in the garden, the soil being kept constantly moist, and as the plants get large enough they are to be put in the pots in which they are to bloom. By fall they will be just right to bring in doors. Of the climbing plants or vines for winter blooming, the Cobea and the Maurandia are excellent. The tubers of the Madeira Vine may be planted now in four or five-inch pots and plunged—that is, sunk in the ground—to the rim of the pot. So also may the bulbs of the deliciously fragrant Tuberosa, and you will have their sweet blossoms in early winter. Ageratum will give you pretty blue flowers. One of my correspondents strongly recommends the Petunia as a winter flower. There is one of the little delicate flowers—a great favourite of mine—the Browallia, which is grown very extensively by commercial florists for winter use.

Plants in pots intended to bloom in winter require a season of preparation, and some of them of absolute rest. We must not expect a Fuschia or a Geranium which has given us its flowers all summer to do the same in winter. There are certain Fuschias, noticeably Carl Holt, Speciosa and Lustre, which are especially adapted to bloom at that season of the year. If you have some choice Geraniums bedded out which you desire to save over winter, it is only necessary to shorten in the branches before potting them.

Of the winter-blooming bulbs, of course the Hyacinth heads the list, but as they must be imported from Holland every year, they are considered rather expensive by some people. We procure them in large quantity and are able to divide our surplus stock among our readers at a nominal charge. There is the gorgeous Tulip, the pretty Crocus, the modest Snowdrop, the sweet Lily of the Valley, and several others. Who is there among flower lovers who does not admire the Cyclamen, for it is in bloom the entire winter? The Tea Roses and Heliotrope will give us their fragrance, Bouvardias, Ageratum, and Begonias their colour, Similax and Lycopodium their greenness, and with these and many others which I will refer to in subsequent letters, our homes may be adorned with a beautiful bouquet even when

"The melancholy days have come,  
The saddest of the year."

—"Rennie" in *Ohio Farmer*.

**SUCCESSFUL PEACH ORCHARD.**

N. F. Murray, of Elm Grove, Mo., stated to the Horticultural Society of that State his experience in peach growing. Twelve years ago he planted 500 trees of the leading standard varieties. The orchard was cultivated three years with corn and potatoes. Afterward the ground was kept cultivated with no annual crop. The only manure was a moderate application of wood ashes. The total amount already received from the orchard is \$2,150, beside a few hundred dollars' worth consumed by the family and friends. This is over fifty dollars from each acre for every year since planting. The land cost fifty dollars; the trees fifty; ploughing and planting seven dollars; cost of cultivation, above the home consumption, forty-three dollars. Whole cost, \$150. This sum added to compound interest at 10 per cent. on cost and expense of gathering, boxing, selling, etc., left a net profit of \$1,088. The locality is in Holt county, on the main ridge between the Nodaway and Missouri rivers.

Subscribe for the RURAL CANADIAN.

## HORSES AND CATTLE.

## A RIDE AND DRIVE HORSE.

"The horse for export to England," says Mr. Patteson in his evidence before the Ontario Agricultural Commission, "is at present produced entirely by accident, being what is called a 'chance' horse. He is of a different mould altogether from a horse generally considered valuable in this country; in fact, those horses which I have sent to England, and out of which I have made most money—getting guineas where I paid dollars—have been horses upon which the farmer or breeder set comparatively little value, and which they regarded as being worth much less than some straight-shouldered cross-bred machiner in their stable, or a shelly, weedy and often ugly animal, able to go at a 2:50 or 3-minute gait.

"These horses are generally picked out of farmers' teams, and have been got by a thoroughbred horse out of a pretty well-bred mare, partly of trotting and partly of coach blood. An English dealer will give you most money for a 'ride-and-drive' horse, with the qualities of a good hunter about him, and many of our farmers' horses are of just such a class.

"I will try to describe a model horse of this kind. He should weigh about 1,100 pounds, stand from 15-8 inches to 16 hands high—anything under 15-8 being classed as small—girth about six feet—the tendency in girth being to depth rather than width; should be short in the back, with very oblique shoulders, level quarters, high set tail, and legs planted well under him; of a good colour, with no objectionable markings; not more than six years old, and of course sound, and free from vice. Such an animal, up to 14 stone, would be worth 120 or 130 guineas, and can often be bought first-hand here for \$120 or \$130. Of course there are not many horses in this country which really come up to the standard I have indicated, and such as do exist have been bred entirely by chance.

"If I wanted to buy twenty such horses, I should go into those districts where, six or seven years ago, was located a thoroughbred stallion of fair size and substance, with good bone, flat legs and two good ends, and I should be quite sure to find there some horses of the class I have described. The stay, dash and thoroughbred characteristics in the progeny would come from the sire, while the mare herself, say half English coach horse, and half roadster, with no actually cold blood, such as that of the cart horse or the Clyde, would give additional weight-carrying power, and mares of this kind are plentiful throughout the country."

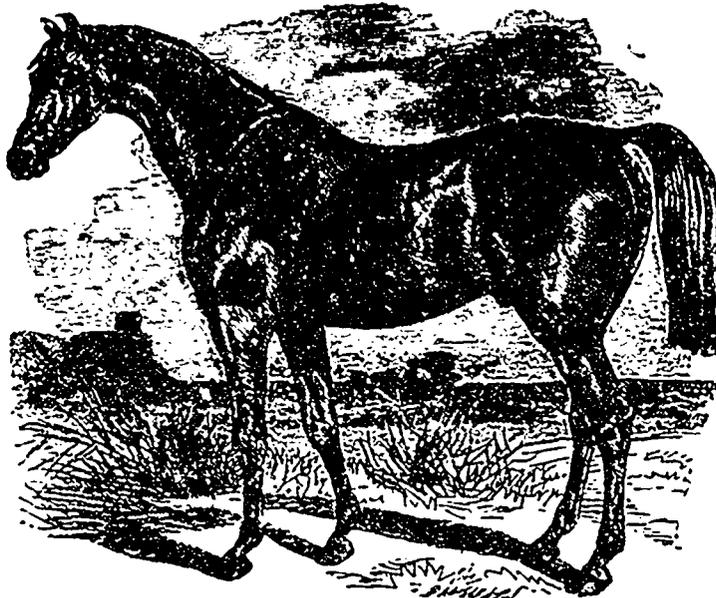
Such a horse as the one described as an English hunter will be likely to come very near to the one Mr. Patteson has in view. For a lighter saddle horse, however, one more nearly approaching to the cut given on this page will be much appreciated.

The field for action in this respect is a wide one, and enough has probably been said to direct attention into certain remunerative channels, and to utilize all the several classes of horses previously described. The farmer, if he attempt horse breeding, should make it a rule to breed for a distinct purpose—to bring together no incongruous elements—to use no horse that is not thoroughbred, or capable of transmitting the characteristics of a distinct breed, and to be content with nothing less than the best of its kind. By this means a superior description of every class will be identified with the horse-breeding interest of Ontario whether it be the heavy draught, the general purpose or roadster, the park horse, or the hunter and saddle horse. The standard of value for Canadian horses generally will be raised, with the possibility at times of large prices being obtained for those possessing speed, or form, in a more than usually marked degree.

## TURNING HORSES TO GRASS IN THE FALL.

It is a popular idea that a horse kept up on a plank floor, and fed on dry feed for a considerable time, needs "a run to grass," and he will be improved in condition by such a change. It is not generally sufficiently considered that such a change is violent: rendered so by the sudden change from dry, nutritious food, to which the system had become accustomed, and has done well on, to a surfeit of grass, which distends the digestive organs, ferments, unduly loosening the bowels and taking of firm flesh which can hardly be restored under a month or two of careful feeding.

Changes in the food given to farm animals, with proper restrictions, are proper to be made, but such as are made through recommendations by ignorant persons, no sound reasons existing for them, are not likely to prove beneficial. A horse is frequently turned out for the purpose, in the language of the groom, of taking the fever out of him, while, if he has been properly cared for, and driven with discretion, he will have no fever in him. It is frequently better to make partial changes in the stable, giving, in place of all oats, an alternation of ground feed, so apportioned that it will be slightly laxative, provided



FOR THE SADDLE.

the horse needs to have his bowels loosened. But to do this in the stable, or by turning to grass, on the assumption that it is good for the animal to be occasionally "loosened up" is wrong.

If the horse owner would apply this principle to himself, he would not be likely, when in the best possible state of health—the digestion good and the muscles firm—to listen to a suggestion that he leave of his bread, meat, potatoes and coffee, and confine himself to greens, soup and water for a month or two. All such changes, whether in man or beast, disturb the functions, diminish the proportion of red globules in the blood, render the muscular fibres flabby, that they tire soon on exertion, overstimulate the kidneys and skin, because these excretories are called upon to release from the system an excess of fluid, green grass being largely made up of water. This excessive action impairs, lets down below the healthy standard, and it takes time, feed and care to replace wasted tissues and restore lost tone.

But it is not alone the sudden change referred to which causes risk. The horse accustomed to a dry stable, protected from wet above and beneath, is poorly prepared to stay out in the cold rains of autumn, much less to lie in the wet. This exposure makes a greater impression than it otherwise would because of the change from grain to grass, the power of resistance being lessened

in proportion as the blood has parted with its globules. Loss of condition and a staring coat come from this exposure; and if the horse be at all susceptible to lung trouble, he may contract this. Hence, for these reasons, the idea of turning a horse out to get him into condition, is a very erroneous one.

If, for any reason—and this should not be an imaginary one—the horse is thought to require green food, or a change, for a time, from the habitual dry grain, then give him bran mashes and roots. But while this experiment is being tried the horse should be relieved from work, as the moment this course is entered upon the system is weakened; the effect being precisely upon the muscles of the horse as upon the steel spring when the temper is taken out. The English farmer feeds roots, not because of any supposed high nutritive value, as they are well known to be made up of three-fourths and over of water, but because, in the case of fattening animals, especially cattle and sheep, roots maintain, in stock confined in the stall or pen, a condition akin to that enjoyed while upon grass. But these reasons do not at all apply to the horse; for if, while kept either for work or speed, he is made to accumulate fat from soft or green food, in proportion to the fat so laid on, in that proportion does he part with his ability to do bodily labour.

But very few know any thing of the value of oil-cake meal for horses. Its use in fitting fine-bred cattle has long been common, and its value fully appreciated. The same can be said of swine, for no other feed will cause a pig to gain and put him in show condition so speedily as oil-cake meal, giving him a glossiness of coat not obtainable so well in any other way. What oil-cake will do for cattle and pigs, it will do equally as well for horses. A horse appearing to be bound up, as the term is understood in the stable, can, by the use of this feed, be relieved of this condition as promptly as by turning out to grass, involving none of the contingencies which attend the latter, the full strength and vigour being maintained in the meantime. Nothing so quickly improves the coat of the horse as the use of a little oil-cake incorporated with his feed, while turning out to grass in sun and rain fades and roughes the hair in a week's time. In addition to this, oil-cake loosens the bowels, the degree to which this is done being entirely under control, while the effect from a run on grass is largely a matter of chance.—*National Live Stock Journal.*

## THE BEST COWS TO RAISE.

The best breed of cows under all conditions has no existence, as so much depends upon the adaptation of the peculiar qualities of each breed to surrounding circumstances. The *National Live Stock Journal* says, however, that, if the production of milk for towns is the leading object, then selected Ayrshires, Holsteins, or Shorthorns will give satisfaction. If they are intended for butter-making, then the Jersey, Shorthorn, and Ayrshire would be the best, taken in this order. If for cheese-making, then the Holstein, Ayrshire, and Shorthorn. It does not, however, approve of pure breeds for dairy purposes; but advises a cross of a Jersey bull on a deep-milking Ayrshire cow, as the delicate Jersey will be much improved by crossing on the hardy Ayrshire, while the grade will yield more milk than the former, and of a richer quality than that of the latter. A square cross of a Jersey bull upon selected common cows also generally produces an excellent dairy grade.

## THE JERSEYS.

Mr. Clarke, of Brampton, was the only witness examined who represented the Jersey breed of cattle. Mr. Clarke does not pretend that the Jersey is of special value for anything but yielding a liberal supply of milk, capable of producing rich butter. From six cows he has, he says, without extraordinary feeding, got 1,800 lbs. of superior butter in a year. He does not claim that his bulls are particularly impressive or prepotent, for he says:—

"The Jerseys in some cases rapidly convey their milking properties to the common animals of the country—not in all cases; some of the bulls leave their impress much better than others."

He has crossed them with the Durham with fair results, and says:—

"The result of crossing a Jersey bull on a Shorthorn cow was, that I got good milkers of a fair size. The milk was very rich; the cross seemed to partake of the Jersey with regard to its milking qualities, and seemed to have more of the Durham build about it. In that case the male did not impress himself so much on the make of the animal as on its milk."

For family use, or where the sole object is to command a high price for very choice butter, the Jerseys are a useful breed of very docile and manageable little animals, but to the ordinary farmer they are, and are likely to remain, practically unknown.  
—Report of the Ontario Agricultural Commission.

## PREPARING CATTLE FOR WINTER.

On this practical subject, the *National Live Stock Journal* says—"The man who, thinking to build cattle up for winter on turnips, containing only ten per cent. of starch and no oil, or on parsnips, generally counted as pretty good feed, yet with only eleven per cent. of starch and no oil, will make very slow headway indeed. Preparatory to the coming on of cold weather, cattle require concentrated food, such as is the opposite of being watery and washy. A moment's consideration of the fact that oats or corn standing in value as seven to one, while the food value of turnips or carrots is as one hundred and fifty to one, will show that the latter should not be relied upon when strength and flesh need to be obtained without undue delay. It is intended to show by this statement of the relative values of the articles named, that seven pounds of oats or corn are equal in flesh-making value to a hundred and fifty pounds of the roots named. These are proper articles for use in connection with grains, but an animal cannot be built up as is required at this season of the year, taking on such vitality and vigour as will enable it to resist the cold weather of the winter months, on these alone."

## TRAINING VICIOUS HORSES.

What the *Philadelphia Record* refers to as "a new and very simple method of training vicious horses" was lately exhibited in that city, with "astonishing results" in the case of the most fiery and untamed steeds:

"The first trial was that of a kicking or 'bucking' mare, which her owner said had allowed no rider on her back for a period of at least five years. She became tame in about as many minutes, and allowed herself to be ridden about without a sign of her former wildness. The means by which the result was accomplished was

by a piece of light rope which was passed around the front of the jaw of the mare, just above the upper teeth, crossed in her mouth, and thence secured back of her neck. It was claimed that no horse will kick or jump when thus secured, and that a horse, after receiving the treatment a few times, will abandon his vicious ways forever. A very simple method was also shown by which a kicking horse could be shod. It consisted in connecting the animal's head and tail by means of a rope fastened to the tail and then to the bit, and then drawn tightly enough to incline the animal's head to one side. This, it is claimed, makes it absolutely impossible for the horse to kick on the side of the rope. At the same exhibition a horse which for many years had to be bound on the ground to be shod suffered the blacksmith to operate on him without attempting to kick, while secured in the manner described."

## FRENCH HORSES.

The *British Quarterly Journal of Agriculture* says: "The horses of Normandy are a capital race for hard work and scanty fare. Have never elsewhere seen such horses at the collar. Under the diligence, post-carriage, or cumbrous cabriolet, or on the farm, they are enduring and energetic beyond description. With their necks cut to the



JERSEY BULL.

bone they flinch not. They keep their condition when other horses would die of neglect and hard treatment." The superiority of French stallions for crossing on the common mares of America is established. This fact has caused the development of the largest importing and breeding establishment in the world, M. W. Dunham, of Wayne, Ill., having imported and bred nearly 1,000, and has now on hand some 400.

## STRAP CURE FOR BALKING.

This is a remedy of one who has had considerable experience in the handling of balky horses, and which he says has never failed him. Two persons are required for the trial. One should hold the reins while the other fastens a short strap or rope—a halter strap, always at hand, answers the purpose well—just below the fetlock of a fore leg; then going forward, he should pull on the rope until the horse lifts his foot; continuing to pull, the foot will be brought forward and set down a little in advance of the other. The horse thus thrown out of a natural position, will move forward to gain his equilibrium. Another pull will cause another move forward. This may be repeated several times, or until the horse moves without having the foot pulled forward. Usually the first or second pull will start him. Three or four such reminders will do the work. When the start is made it is generally an easy one. Sometimes, however, it has the appearance of the horse being in a hurry to get away from the pro-

voicing man with the strap; therefore a steady hand should manage the reins; I have never known a horse under this treatment to kick or act mean in any way other than to try to run. When he does start off the hold on the strap should be given up. After having gone twenty-five or more yards the horse should be gently brought to a stand and the strap removed. Then try to start him without the strap. If he does not move off at once apply it again. He will soon tire of being thus annoyed, and will give you no further trouble in this way.

## HOW TO TAKE CARE OF HARNESS.

A harness that has been on a horse's back several hours, in hot or rainy weather, becomes wet; if not properly cleaned the damage to the leather is irreparable. If, after being taken from the horse in this condition, it is hung up in a careless manner, traces and reins twisted into knots, and the saddle and bridle hung askew, the leather when dried retains the shape given it when wet, and when forced into its original form damage is done the stitching and the leather. The first point to be observed is to keep the leather soft and pliable. This can be done only by keeping it well charged with oil and grease; water is a destroyer of these, but mud and the saline moisture from the animal are even more destructive. Mud in drying absorbs the grease and opens the pores of the leather, making it a prey to water, while the salty character of the perspiration from the animal injures the leather, stitchings and mountings. It therefore follows that to preserve a harness, the straps should be washed and oiled whenever it has been moistened by sweat or soiled by mud. If a harness is thoroughly cleansed twice a year, and when unduly exposed treated as we have recommended, the leather will retain its softness and strength for many years.

## WATERING HORSES.

There is a certain want of common sense and humanity in the habit many persons have of watering horses three times daily. The only reasonable or sensible or prudent plan to pursue is to give the animals water according to their real wants. This is a different matter from giving it to them capriciously, or according to their fancy. If we give way to the latter, we will find the animal becomes as cunning as a monk, and will play the old soldier at every opportunity, pretending to drink and make believe, so as to gain time and shirk work. But it is cruel to compel a team to plough or work from morning until noon, or from noon until night, without allowing it the privilege of a refreshing draught.—*Planter's Journal*.

If a horse is shy and hard to catch, take finely grated castor, oils of rhodium and cummin. Keep them in separate bottles, well corked. Put some of the oil of cummin on your hand and approach the horse on the windy side. He will then move toward you. As soon as you can reach him rub some of the cummin on his nose, give him a little of the castor or anything he likes, and get a few drops of the oil of rhodium on his tongue. After this you can make him do nearly everything you want. Treat him kindly, feed well, handle gently, and your victory is certain.—*Turf, Field and Farm*.

## SHEEP AND SWINE.

## WINTER MANAGEMENT.

The winter will soon be here, and our sheep will require that special attention which the cold months demand. There are comparatively few who have not learned—learned by costly experience, if no other way—that to neglect the sheep in winter, is a very unprofitable thing to do. All through the North, shelter is needed, and without it, it is useless to count upon profit in sheep husbandry. In some cases the sheep are not brought to the pens early enough, but are allowed to run on the pasture, without other food, until they fall away in condition, and it is found that the loss is difficult to retrieve. Start them on the winter in first-rate condition. When the frosts have touched the grass, bring up the sheep and feed them once or twice a day. When the weather is good, however, they should be allowed to run in the field, until it becomes quite cold, or the ground is covered with snow. When feeding is commenced, the oldest and poorest of the flock should be selected out for special care. They will need higher feeding than the others, and they should be fitted for the butcher as soon as possible, and if any happen to be in such condition as not to promise anything from such a course, it is far better to kill and skin them at once. It certainly will not pay to keep them through the winter, and have them die in the spring.

As to the number of sheep which should be kept in one flock, it will depend upon circumstances. The Merino has fully established the reputation of being able to do well in large flocks. But the long-wooled sheep can be kept in large flocks, also, if they have plenty of room, and if there is lack of room, it is not advisable to keep even the Merino in large flocks. Animals cannot do well, if they are so crowded as to contaminate the air they breathe, or prevent a free escape of the gases that come from their bodies. Sheep are peculiarly sensitive to bad air, it is said, but we do not know that they are much more so than other animals. It is a plain and indisputable fact that no animal system can be forced to live in an impure atmosphere, without injury to it. Sheep must have good wholesome air to breathe, and that necessity should be kept constantly in view when we are constructing shelter, and when deciding as to the number that shall constitute a flock. The sheep does not suffer much from the cold. If it is clear, the animal will not complain because the mercury is low. But they cannot stand much dampness, either under their feet or on their backs. Sheds should be so constructed that they will be open toward the south. If convenient, they may be so built that they can be closed if desired, but it will do no harm if they are permanently open on the one side; and if any shelter which was not especially designed for sheep, and which is not so constructed that it can be freely opened as here suggested, is utilized for the purpose of sheep sheltering, by all means attend to the ventilation. On no account shut a flock of sheep up in a place where the pure air will be exhausted before morning.

In the centre of a shed constructed for a shelter, there should be a rack about which the sheep can gather without crowding, and feed. The rack should be arranged so that it will not only hold hay, but also provided with means for feeding roots or meal. Keep the floor dry, and to this end use plenty of bedding, if anything is at hand that can be utilized for such a purpose. If an abundance of bedding cannot be had, be sure and clean out the place every day. It is hardly necessary to remind anyone that exercise is absolutely necessary. On no account deprive the sheep of exercise. Disease must follow such a neglect.

## BERKSHIRE SWINE.

The Berkshire has been a favourite breed of swine now for fifty years. In that time, however, many important changes have occurred in their make-up, so they now stand among swine where the blood horse does in the equine race, and where Shorthorns do among cattle, combining elegance with symmetry of form and high breeding. Yet in all this they have preserved usefulness in the highest degree, and have been used within the last twenty-five years probably more extensively than any other breed of swine, in improving newer breeds giving elegance, firm bone, great muscularity, and good constitutional vigour.

In reference to the history and general make-up of Berkshires, the *American Encyclopedia of Agriculture* says:

"They are more uniform of colour than any of the white and black breeds, the fashionable colour now being white feet, tips of tails, and a little white in the face, the rest of the body being jet black.

"More than forty years ago, as we then knew and bred them, there were many upon which a sandy colour would appear. And they were larger boned and coarser in their make-up, but nevertheless, perhaps, containing more lean flesh (muscle) than at the present day; not so kindly in fattening, neither did they contain so much lard, but their hams, shoulders and bacon were, we think, superior to the more modern Berkshires, or those of to-day.

"The best type of this breed now have short noses; slightly dished faces; small, fine, erect ears; eyes wide apart; straight back, preserving its width from the neck to the rump; muscular hams and shoulders; the bacon pieces well broken with strips of lean, fine hams, short legs, excellent hoofs, and in killing showing but little offal. Their vigour makes them excellent gleaners, to follow cattle fattened in the field, and their weight, from 300 to 600 pounds, renders them sought after by the packers, especially those of hams and bacon.

"They have been with us always a favourite breed on account of their muscular development, as among the middle breeds, as the Essex have been among the small breeds. It is, however, not to be denied that they will not stand starving. They require strong feed and plenty of it, to reach the best development—and what animal does not? Nevertheless, we do not think they assimilate quite as much of their food, when the bulk of it is corn, as do some of the breeds more inclined to lard. Yet, no breed will reach good development on scant food, and when muscle as well as fat is wanted, the breeder or feeder would have to seek far for a hog better combining good qualities, and full medium weight."—*Prairie Farmer*.

## A SMALL BREED OF PIGS.

An English contemporary, speaking of a breed of pigmy porkers, three sows and a boar from Nepal, on exhibition at the Zoological Gardens, London, says:

"This species is so rare, that since Hodson described these animals, fifty years ago, there has not been a single specimen attainable in Europe, and even the museums have been unable to get more than a single skin. They are very small in size, scarcely bigger than a large wild rabbit; or probably a better idea of their size may be formed by giving their weight at seven or eight pounds each. They are very active on their legs, running very swiftly, and they are very shy. Their skins are well covered with short, reddish-brown hair, or rather bristles; they are very clean

feeders, and also very cleanly in their habits. Their flesh is esteemed very good for eating; and thus these interesting little porcines are naturally the subjects of other contemplations than their zoological rarity. If they can be bred in the Gardens, the Society will find profitable results repay the price given for them, by disposing of the first offspring to other menageries; and the acclimatization of the subsequent progeny would seem to be well worthy of attempt, as they might be kept seemingly without offensiveness in the yards and gardens of domestic houses, and be fed upon potato parings, vegetables, and *dabris* of food. They are very fond of rice, and will eat small portions of meat; but they will not touch the wash or greasy matters commonly given to ordinary pigs."

## FATTENING SHEEP IN WINTER.

1. A good way is to begin early in December by giving in addition to straw, to each sheep each day for a couple of months, a pound of meal, grain, or oil cake.

2. When good hay is fed, the other food may perhaps be a little reduced.

3. Feed regularly. Sheep will do better on inferior food if fed regularly, than on good food if fed irregularly. Attested experience is in favour of feeding three times a day, morning, noon and night. In this many of the best breeders agree. Some, however, feed but once a day, and think it best. When this is done, the last feeding should be a considerable time before dark, for sheep do not feed well after dark.

4. Salt must not be neglected. As is well known, salt is not so necessary in the winter as in the summer; still, it is necessary, and should be fed at least once a week. Some breeders keep it before the sheep all the time, and this is the better way. Randall mentions the practice of Gen. Marshall, of New York State, which is to take the oats from the hay racks and place them in a box rack under cover. Then they are sprinkled with brine, and the sheep when hungry for salt are not only supplied with it, but, by salting the oats, consume all the straw.

## HOW TO FEED PIGS.

A correspondent of the *Minneapolis Tribune* says:—"The nice point in growing pigs is to keep them growing. This is easily accomplished for the first three or four weeks by feeding the sow bountifully on nourishing slops, but the time comes very early in the life of a pig when it is impossible for the sow to supply nutriment as rapidly as they are assimilating the food, and, as they have not in the meantime been taught to eat for themselves, there comes a period of retarded growth. I usually prepare for this by providing a trough apart from the sow, to which the pigs can have access, and commence by giving them a little sweet milk, which they soon learn to drink greedily; this is gradually changed to skim milk, then to sour milk, buttermilk, or whey, with crumbs of bread scraps from the kitchen table, etc. As the pigs grow older I feed cornmeal cooked into a mush and mixed with whey, skimmed milk, and other house slops, and finally soaked corn, by which time they are old enough to take kindly to grass and clover, and this, with the soaked corn, keeps them growing rapidly. Do not depend too largely upon corn, but provide grass in abundance. A most excellent food for the purpose of increasing the flow of milk may be prepared by grinding oats and corn together, in about equal quantities by measure, and making a slop of the mixture. To this may be added oil meal with profit. Ground rye, barley, or wheat may be substituted for the corn or oats, and a mixture of all these grains will make an excellent diet; but do not forget the grass."

## THE DAIRY.

## DETERIORATION OF DAIRY FARMS.

Mr. R. K. Tomlinson, of Bucks County, Penn., writes an interesting letter to the Philadelphia Press, the largest part of which we copy below:

"Thirty or forty years ago it was the almost universal practice in this county to apply the whole of the barn-yard manure to wheat, seeded, as now, with timothy and clover. I think that the most marked examples of rapid improvement in farms that this country has witnessed were under this system, followed as it was by the most extensive dairymen of that period. The oat crop was a heavy yielder of straw in those days, and this, with the wheat-straw, the refuse of the corn-fodder, and usually a great mass of second-crop clover threshed for seed, found its way into the barnyard, and was mixed with the excrements of a full complement of well-fed stock. Within my recollection, and doubtless within that of many of my readers, is the sight of many such barn yards, with manure massed four or five feet thick, and saved by its very depth and solidity from leaching or wasteful ferment. Many farmers boasted of 250 to upward of 300 two-horse loads of such plant food, containing every chemical element needed, and more important still, giving the humus and the spongy mechanical condition of the soil necessary to withstand severe droughts; and, probably, most important of all for the clover plant, just coming into its best action the second year of its application when most needed for grass. Modern barnyards, with the oat-straw, and sometimes the whole of the corn-fodder and part of the wheat-straw fed to the stock, with no second-crop clover-straw, and with their manure removed by dribblers at all seasons, present no parallel in their offering to the wheat and clover crop. So heavy was the first season's growth of grass under the best application of this system, that James C. Cornell, deceased, one of Northampton's best farmers, found it more feasible to pasture than to attempt to mow the excessive growth; and surely such pasturing could not be harmful to fertility. Even on our sandy soils near the river, Stacy Brown and others secured a constant succession of the heaviest crops of clover and timothy by extra heavy and rich manure from fattening stock, put just where it would do the most good.

"Fifty or more years ago, when there was much latent fertility in the soil which clover better than any other plant could make available, the old maxim, 'Sow clover to improve the soil,' was doubtless correct. But now, when our soil, like everything else, is worked for all it is worth in immediate returns, that maxim needs to be reversed, and we should say, improve the soil in order to raise clover. Dairying is not necessarily exhaustive, and, if we do not improve our farms as rapidly as our fathers did, it is because we do not make as much and as rich barn-yard manure as formerly, and do not, as they did, give the clover plant the chief part of the benefit therefrom.

"Instead of cutting and feeding so much of our cornstalks and straw, had we not better pass more of them into our stables and barn-yards, and thus increase the quantity, and, by their protection, the quality of our manure? Or, if we must have a scanty pile of frequently disturbed manure, might we not by shedding, prevent this undue exposure to waste? If the clover plant must be robbed of that direct inheritance, which seems best fitted to its growth, need we, at least, put it so far away in the order of succession? The phosphates have been proved to give as good results on sod corn as on wheat, ought we not rather apply them to the former and save our barn-yard manure for wheat, or at least for spring crops, such as potatoes, millet, or fodder-corn, immedi-

ately preceding wheat? Instead of demanding a highly soluble fertilizer, which will flush in the pan on the wheat crop, had we not better supply a larger quantity of the cheaper and less soluble compounds which will reserve more of their strength for the grass crop?

"Lastly, when we are doing all we can to restore the grazing capacity of our arable land, which has decreased with the decadence of clover, we should increase our soiling practice. But as a true friend and large practitioner of soiling, I must give a warning note. Clover and the grasses must still be considered the sheet anchor of fertility and profit in dairy farming."

## CHANGING THE DIET OF COWS.

Those who have dairy cows need to be careful in changing their diet. There is a great deal to be thought of in this connection. It is a fact, well established by the experience of dairymen, that cows which are regularly fed with grain while they are at pasture, even if the pasture is fresh and plenty, will give more milk and make more butter and cheese than cows equally good, but living on grass only; yet if a liberal ration of meal is given to the cows living on the fresh grass, the first effect is to cause shrinkage in the milk; and if the cows which have become accustomed to have meal with their grass, have their meal suddenly taken away, they will also shrink, the pasture in both cases being equally fresh and plenty. The loss of milk in neither case can be charged to inferiority of the food, since the changes in feed are the reverse of the other; while the effects are alike. The effect is due to a change in the action of the stomach to adapt its character to the digestion of an established food.

Whoever places much dependence on the strainer for securing clean milk will never make gilt-edged butter. Allowing dirt to get into the milk and then depending on the strainer to get it out is a very poor apology for cleanliness. More or less of the dirt, especially everything of a soluble nature, and some that is not, will find its way through the meshes of the strainer.

Our English cousins have been making some very elaborate experiments to determine the relative qualities of night and morning's milk. The decision is in favour of the milk taken from the cow in the evening being richer both in butter and cheese-making qualities. The milk of cows fed ground feed in winter was richer than that produced by the same cows from grass in summer.

An American exchange says: "Canada has become more emphatically a dairy country than the United States. With a population of 5,000,000, the Canadians manufacture annually 60,000,000 pounds of cheese, equal to twelve pounds per capita, while we, with 50,000,000 people, make 300,000,000, or six pounds per capita. With a population not exceeding one-tenth of ours, their exports of butter are about one-half as great as ours."

A DAY or two ago, says the *Breeder's Gazette*, we saw a fine, large golden-sorrel polled cow of about 1,000 pounds from the milk of which fourteen pounds of butter per week have been made this spring, and from her milk enough cream was taken, at the same time, for the tea and coffee for a family of three or four. Her owner is very methodical in his work and exact in all his statements, and for years has been widely and well known as perfectly trustworthy in word and act. The cow was out of a high grade Shorthorn, probably of the American Wood's pattern, and her sire a pure Galloway.

## CÉRÉAM.

COMMON sense is not a common thing.—*Valaincourt*.

An Arab proverb: "All sunshine makes the desert."

To despise money is to dethrone a king.—*Chamfort*.

EXPERIENCE is the name men give to their follies or their sorrows.

A MAN of sense may love like a madman, but never like a fool.—*La Rochefoucauld*.

THERE is no joy where there is no love, and love begins to die when it becomes dumb.

God's almanac has but one day—that is, today; Satan's almanac has but one day—that is, to-morrow.

THE future of society is in the hands of the mothers. If the world was lost through woman, she alone can save it.

A CHEERFUL temper, joined with innocence, will make beauty attractive, knowledge delightful, and wit good natured.

MEN may say of marriage and women what they please; they will renounce neither the one nor the other.—*Fontenelle*.

"I'm saddest when I sing," warbled a young lady at an evening party; and the other guests said: "So are we! so are we!"

It is no mark of a wise or a holy man to boast of his being free from error, or to refuse to acknowledge when he is in error.

She: "So you would not take me to be twenty? What would you take me for, then?" He: "For better, for worse." They are now keeping house.

"At what age were you married?" asked he, inquisitively. But the lady was equal to the emergency, and quietly responded, "At the parson-age."

EVERY household should have at least a few flowers. Flowers exert an educating and refining influence over children. Have a few flowers for their sake, if for no other.

"Can't you trust me, darling?" murmured the impecunious lover to the daughter of an old money-lender. "Not without real estate security," she absently replied.

"Well, madam, how is your husband to-day?" "Why, doctor, he's no better." "Did you get the leeches?" "Yes, but he only took three of them raw—I had to fry the rest."

Aunt: "Has any one been at these preserves?" Dead silence. "Have you touched them, Jimmy?" Jimmy, with the utmost deliberation: "Pa never 'lows me to talk at dinner."

A LADY in the West of Scotland said to a certain humourist, "Really, Mr. Johnstone, there's nae end to yer wit." "Gude forbid, madam," answered the humourist, "that I should ever be at my wit's end."

LECTURE upon the rhinoceros: Professor—"I must beg you to give me your undivided attention. It is absolutely impossible that you can form a true idea of this hideous animal unless you keep your eyes fixed on me."

"WHAT did you say the conductor's name was?" "Glass—Mr. Glass." "Oh, no!" "But it is." "Impossible!—it can't be." "And why not, pray?" "Because, sir, Glass is a non-conductor." Deafening applause from the scientific passengers.

KIND words produce their own image in men's souls, and a beautiful image it is. They soothe and comfort the hearer. They shame him out of his unkind feelings. We have not yet begun to use them in such abundance as they ought to be used.—*Pascal*.

## GOOD PAY TO AGENTS.

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## The Rural Canadian.

TORONTO, NOVEMBER 1st, 1882.

### INVESTMENTS FOR THE FARMER'S SURPLUS CASH.

The good crops of the last four years have largely added to the wealth of the country. Farmers especially have been made comfortable in a financial sense. Their surplus of grain and live stock has been converted into cash, embarrassing debts have been cleared off, and bank deposits have been largely increased. It is a good thing for the farmer, as well as for the business man, to stand well with the banks; but in the case of the farmer there are more ways of establishing credit than by keeping a deposit book. There are ways, too, in which he may get more liberal returns. He may add to the comforts of home, making it more attractive for the boys, and so keep them from drifting into business, or the professions, or into mischief. He may provide better outbuildings, or renovate the old ones, and so make his cattle and horses snug for the winter. He may improve his live stock by introducing new blood, or better breeds; or he may increase the productive capacity of his land by putting more manure on it, and thoroughly underdraining it.

All these are valuable ways of investing the farmer's surplus; indeed it is almost indispensable to profitable farming that the great bulk of the cash proceeds of crops and stock should be invested at home. What is a paltry four per cent. rate of interest paid by the banks to the return made by permanent improvements on the land the farmer tills? Or what farmer with any feeling of pride in his occupation would care to be known as a mere money-grubber? The farm is the farmer's best bank!

There is much that might be said on the several forms of investment we have indicated, and especially on underdrainage. This is now a live subject with the farmers of Ontario, and we purposely select it for a few practical remarks. The need as well as the benefits of underdraining has been well illustrated by the vicissitudes of the present season, as every observant farmer knows. The uprooting of wheat and clover by spring frosts was very general, but everywhere the greatest damage was done on low and undrained lands: where the land was well underdrained, either naturally or artificially, the injury by upheaval was comparatively trifling. The cold weather and the frequent rains in April and May not only delayed seeding operations, but checked the growth of the grain when sown. Where the land was underdrained, ploughing might be commenced as soon as the frost was out of the ground, and the soil being dry and warm, vegetation was promoted. In a great many instances reported to us, seed corn either rotted in the hill, or the blade perished from "cold and exposure"—it died of "too much drink," as some farmers phrase it. The rainy spell at harvest time made it difficult in many places to use a reaper, for the ground being soaked with water, the machine could not be drawn over it. Then the drouth of this fall greatly retarded the seeding

of wheat, especially on clay land, which was baked so hard that the plough turned it up in lumps. The same land properly underdrained would be readily workable in the driest season.

Every farmer has doubtless observed these results, and we feel confident that the lesson they teach will not be lost. We know that in many sections of Ontario, and especially throughout the western counties, great progress has been made in underdraining this year. The chief difficulty has been to obtain tile in sufficient quantities, for the supply has not been commensurate with the demand. But this can be only a temporary drawback; let the demand continue and the tile-makers are sure to respond to the call.

There is no better opening for an investment of the farmer's surplus cash than the tile-drain on his own farm! It will pay a liberal dividend in the improved crops of the first year, and, be the season wet or dry, the tile-drained land will produce the largest yield of grain, grass or roots.

### SILOS AND ENSILAGE.

There is a wide diversity of opinion among farmers on the value of ensilaged fodder for cattle. Some denounce it as useless and baneful; others maintain that there is no better or healthier food, and none that gives such large results for so little money. It is well to guard against extravagant statements on either side, at any rate until the silo system has been given a fair trial at the hands of intelligent men. And that trial should extend over a series of years.

One of the latest contributions to the study of the subject is a special Report published by the United States Department of Agriculture, being a record of practical tests in the United States and Canada. The experience of ninety farmers is given in response to inquiries of the Department, dealing with the cost and construction of silos, the crops used for ensilage, the manner of preparing and storing it, and its value as fodder for milch cows and other farm stock.

There is, according to this Report, no uniform plan of construction, and the cost depends on the farmer's ideas of economy. It may be only a trench in the ground, a room in a bank-barn, a cheap structure of planks or boards, or a solid structure of stone, brick or concrete. What is important is that the floor should be dry, that the walls should keep out frost, and that the roof should shed rain. For convenience in feeding stock it should be built near the stables. The cost of construction ranges from fifty cents per ton of capacity for the simplest wooden silo to \$5 per ton for walls of brick or stone.

The crops grown for ensilage are corn, rye, oats, Hungarian grass, peas and clover, but corn is more in favour than any of the others, for the reason that it produces more fodder per acre. Its average yield when sown in drills is about twenty tons, while some of the other crops will not yield more than four or five tons. If grown near the silo the labour and cost of drawing in may be kept down to a minimum.

The usual practice is to cut and store the crop in the green state, and before ripening begins. It is drawn to the silo as soon as reaped, run through a cutting box driven by horse or steam power, packed away, covered with rough boards and subjected to a pressure of 100 to 200 lbs. per square foot; stones or sand in barrels may be used for weights. If cut in half-inch pieces it is easily pressed, and it must be borne in mind that exclusion of air is the main secret in the ensilaging of fodder. It is fit for use as soon as it has cooled, which may be in three or four weeks.

Ensilage does not appear to be a safe food for

horses, for several cases are reported where it was believed to have caused death. But for sheep and cattle, and especially for milch cows, the testimony of the ninety farmers reporting to Dr. Loring, is unquestionably favourable. A few say that no effects were visible, or that the milk supply failed, and cattle fell off in flesh; but seventy-five out of the ninety say that cattle fed with it improved in health and flesh, and that the flow of milk increased. "Cows always gain unless in full flow of milk." "Cows doubled quantity of milk in two weeks." "Increases quantity and quality of milk." "Cows in better flesh than when taken from pasture." "I never had stock do as well on any other feed." "Exceedingly profitable." "They look sleek, drink less, and are happy." "Juicy, palatable food for stock in winter." "Never saw cattle fatten as fast on anything else." "Twice as many cattle can be kept on the same acreage." "The cheapest feed for cattle." "Better than root crops." "The butter is like June butter." "The enormous crop which can be raised per acre settles the whole question." These remarks, taken at random from the Report, indicate the general drift of opinion on the value of ensilage as food. It should be added, however, that the prevailing practice is to mix with it a small quantity of bran or corn-meal each day. Occasionally, too, some hay or oat straw is given.

The value of corn ensilage as compared with hay, is thus stated by Mr. Sprague, of Vermont:

"It is a good grass crop that will yield two and a half tons of hay per acre. This would all be required here, with six months' feeding, to winter one cow. Five tons of ensilage winters the same animal in better condition; but with thirty tons per acre, an acre of land will winter six cows, and produce ten per cent. more milk."

If this is true, the importance of the silo system cannot be over-estimated. It means more milk, more cheese, more butter, and (better than all these) a bigger manure heap for the farmer, richer fields, more bountiful crops, and a more abundant supply of mutton, pork and beef.

We hope to see the system receive a fair trial in Ontario, and more particularly by farmers in the great dairy centres. June milk and butter in midwinter would be a treat indeed. The farmers who supply the Toronto market with these commodities should be the first to make the experiment. If successful it would be a boon to their customers, and a source of profit to themselves. And if it is true that the turnip has doubled the grain crop of England, may it not prove true that ensilage will treble the grain crop of Ontario? We advise caution; but the experiment ought to be made, and it need not cost much.

### CLOVER AND MANURE.

It may seem to some that frequent cropping with clover and grain, instead of renovating the soil, will exhaust it. Experience, however, proves the contrary. Clover, it is believed, in some way draws its nitrogen from the air. How this is done is not well settled. Some have held that the leaves had power to gather the nitrogen directly from the air, while others have thought that it drew its nitrogen from the subsoil. It is probable, however, that the leaves either absorb nitrogen from the air, or else the surface soil, kept moist by decaying leaves, absorbs the nitrogen or ammonia from the air and imparts it to the roots of the plant. Experiments have shown that soil on which clover had been grown contained more nitrogen than it did before the growth of the clover, notwithstanding the large amounts removed in the hay. It seems pretty well proved that the clover in some way draws its nitrogen

largely from other sources than from the soil, and consequently by growing it the soil is made richer in nitrogenous elements.

Prof. Voelcker is one of the strongest advocates for clover in a farm rotation, and gives these as his conclusions upon its value and general character :

1. A good crop of clover removes from the soil more potash, phosphoric acid, lime and other mineral matters, which enter into the composition of the ashes of our cultivated crops, than any other crop usually grown in this country.

2. There is fully three times as much nitrogen in a crop of clover as in the average product of the grain and straw of wheat per acre.

3. Clover is an excellent preparatory crop for wheat.

4. During the growth of clover, a large amount of nitrogenous matter accumulates in the soil.

5. This accumulation, which is greatest in the surface soil, is due to decaying leaves dropped during the growth of clover, and to an abundance of roots, containing when dry, from 1 1/2 to 2 per cent. of nitrogen.

6. The clover roots are stronger and more numerous, and more leaves fall on the ground, when clover is grown for seed, than when it is mown for hay ; in consequence, more nitrogen is left after clover seed than after hay.

7. This crop causes a large accumulation of nitrogenous matters, which are gradually changed in the soil to nitrates.

8. Clover not only provides abundance of nitrogenous food, but delivers this food in a readily available form (as nitrates) more gradually and continuously, and with more certainty of good result, than such food can be applied to the land in the shape of nitrogenous spring top-dressings.

A GREAT COUNTRY.

Prof. Bell, in a report just published, gives a most interesting account of his explorations in the James' Bay region. He says that round James' Bay, and up the eastern shore of Hudson's Bay, deposits of coal and iron lie closely packed together in seams and veins of surpassing richness. Vast tracts of forest also exist there with deposits of silver, copper and molybdenum. The region, in fact, so Prof. Bell thinks, will be the future Pennsylvania of the North America Continent. The climate, and Mr. Bell has spent thirteen summers and three winters there, is described as milder than that of the North-West. Moosefactory, at the extreme north of the Moose drainage basin, is in latitude 51° 16', the same as the Qu'Appelle valley, and further south than Battleford. Its winters are not colder than those of Manitoba generally, and are warmer than the Athabasca and Peace River countries. The average temperature for the year (50° 8') is higher than that of many parts of the best wheat-growing lands of the North-West, and less than four degrees colder than that of Winnipeg—a difference chiefly perceptible in early spring. The southern part of James' Bay district is further south than Manitoba, and on the same latitude as districts in Quebec, where wheat and even Indian corn are grown every year. The "fertile belt" of the district is a gently undulating plain, with a sandy loam soil, and lies in the same latitude as Winnipeg. If wheat in Manitoba is an assured success every year, it is reasonable to suppose that James' Bay district, with its large area of fertile soil, cannot be without agricultural value. Winter at James' Bay sets in about the middle of November, the ice breaks up in April, and summer begins in the first week in June. The snow-fall rarely exceeds six inches. The summers are slightly cooler than Winnipeg summers, but warmer than those of the North-West. Late frosts are of rare occurrence, and the early frosts are seldom felt before the second week in September.

It is certain that this comparatively unknown land has a mighty future before it. Toronto is

already seeking to obtain a foothold there. Moose Factory is 500 miles north of Toronto, and a scheme is on foot to run a 800 mile branch to the Factory from Callendar on the C. P. R. or a 200 mile branch from near Nepigon.

USEFUL FACTS.

SOME USEFUL INFORMATION ABOUT LAND IN THE NORTH-WEST.

GOVERNMENT TERMS—TERMS OF HUDSON'S BAY COMPANY—SYNDICATE SECTIONS—TOWNSHIPS AND RANGES.

The following information will be of value to all persons who propose visiting the North-West for the purpose of taking up land :—

The land in the North-West is surveyed into townships, about six miles square, and numbered in regular order northward, from the international line between Canada and the United States, and they lie in ranges which are numbered in regular succession westward of certain north-and-south lines, called "principal meridians," the first being about fourteen miles west of Winnipeg. There are also certain ranges east of the first principal meridian. Each township is subdivided into thirty-six sections of 640 acres each, or one square mile, and numbered as shown on the following diagram :

31	32	33	34	35	36
30	29	28	27	26	25
19	20	21	22	23	24
18	17	16	15	14	13
7	8	9	10	11	12
6	5	4	3	2	1

Homesteads and Pre-emptions.—Any one over 18 years of age can homestead 160 acres of Government land free, and pre-emp 160 acres alongside of it for \$2.50 per acre, payable at the end of three years from date of entry, without interest, or as soon as his homestead duties are performed. But he must remain continuously on the homestead for three years, and break or cultivate a fair share of the land, say from ten to fifteen acres, each year on an average—though no quantity is stipulated—and put up a suitable house on it of course. But any kind of a house that suits a man to live in will satisfy the Government. The patent will be issued at the end of three years. A man must go on the land soon after entering for it in the office, but it cannot be taken up or jumped by another party for six months after entry. If a man must leave in case of sickness or any urgent business, he can obtain leave of absence from the land agent in whose district it is located, and his rights will be protected till he returns. After remaining on the land one year, if a man wishes he can pay for the homestead and pre-emption both at the rate of \$2.50 an acre, cash down.

No one can homestead or pre-emp for another, not even his own brother, as such a privilege would be sure to be abused by the horde of speculators with whom the North-West is infested. An entry of \$20 for homestead and pre-emption combined is charged in the land office. A wife cannot, but a widow can homestead land.

Syndicate Terms.—The uniform price of the C. P. Railway lands is \$2.50 per acre, payable one-sixth down and the balance in five years, with a rebate of \$1.25 for every acre brought under cultivation within four years. By the new regulations just issued, every settler must cultivate one-eighth of the land he purchases each year.

Hudson's Bay Company Lands.—These lands are offered for sale on easy terms of payment. The prices range from \$2.50 (10s.) to \$6 (28s.) per acre, according to location and other circumstances. No settlement duties required.

The terms of payment are : one-eighth of the

price in cash at the time of the sale, and the balance in seven equal annual instalments, with interest at seven per cent. per annum on the amount unpaid.

Reserves.—The above provisions shall not apply to lands valuable for town plots, or to coal and other mineral lands, or to stone or marble quarries, or to lands having water-power thereon ; and further, shall not, of course, affect sections 11 and 20 in each township, which are public school lands, or sections 8 and 26, which are Hudson's Bay Company's lands.

Timber for Settlers.—Homestead settlers, having no timber on their own lands, can purchase wood lots in areas not exceeding twenty acres each, at a uniform rate of \$5 per acre, to be paid in cash.

CURRENT NEWS ITEMS.

The West Middlesex Agricultural Society took in \$405 at the gate on show days.

Mr. ROBERT BUCK, of Watsontown, Pa., recently purchased a bull calf from Mr. Fuller, of the Oaklands Jersey Farm, for which he paid \$500.

MR. ALEX. CRANSTON recently sold the pine on his farm in North Dumfries by tender. The highest tenderer was Mr. James Barton, of Rosville, \$2,710. There are about 480 trees, and the price is considered a good one.

The farmers are very backward with their fall ploughing, owing to the ground being too dry. It is almost impossible to plough clay land. The corn crop is the best for years, and the season has been so favourable that farmers have saved the corn in good shape.

We are informed that ripe blackberries, and also white berries, were picked from bushes in Mr. Geo. Kiug's garden a day or two ago. They were full size, excellent flavour, and in all respects equal to what they would be in the regular season. So says the Berlin News.

In the Montreal market, says the Recorder, Brockville butter is quoted at from 18c. to 20c. per pound, while Morrisburg butter is quoted at from 20c. to 21c. per pound. At one time the Brockville article was considered equal to that of Morrisburg. Our farmers had better look after their laurels.

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

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

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## BEES AND POULTRY.

### BEE AND HONEY SHOW IN SCOTLAND.

The following is from the *London Journal of Horticulture* :

The East of Scotland Bee keepers' Society held its annual exhibition at Dundee on August 31st and two following days. Notwithstanding the unfavourable nature of the season, the display was unusually full and of splendid quality. Many of the leading bee keepers in the lowland districts were unable to stage a single exhibit, but those from the interior and highland districts came forward in force with large and well finished lots. Altogether, about 2,000 lbs. of honey were staged, and every class was well competed in. The most striking exhibits were those in the classes for the most artistic displays over and under 100 lbs. Mr. Raitt was first in both classes, and his exhibits were justly admired for their excellent finish and tasteful arrangement. Part of the same lots took two first prizes at the great Preston Show in the following week, and there elicited many comments highly flattering to Scottish bee-keepers. Altogether, there were seven entries in the display classes, and in all the quality of the honey was very fair. The poor taste shown in the arrangement of some entries where shelves and stages were relied on, received a check in the awards of the judges in favour of those exhibiting less carpentry work, but more variety in the size, form and decoration of the sections and glasses of extracted honey.

In the classes for living bees the exhibition was unusually full, no less than ten observatory hives being staged, containing bees of four different races—blacks, Italians, Cyprian, and Syrians. Besides these, there were five neat nests of humble bees and one enormous "byke" of wasps. Several of the observatory hives presented novel features in the direction of an attempt to keep the combs in their natural position side by side, while rendering them capable of individual inspection. The one exhibited by the Secretary, Mr. Warden, accomplishes this by having the hive double the usual height, and so arranged that the padded quilt could be raised to the top, and any separate frame thereafter lifted to a position open for inspection.

### PROFITS FROM A SMALL FLOCK OF LIGHT BRAHMAS.

H. S., Bergen county, N. J., gives the following statement of the income from a flock of eleven Light Brahma pullets and one cock from July 1, 1881, to July 1, 1882, when they were one year old. The pullets began to lay on the 15th of November, when they were five and a half months old. The account stands as follows: Fifty-eight dozen eggs, sold for \$17.50, seventy-three chickens raised, averaging two pounds each, now worth twenty five cents per pound, \$36.50, one cock used, weighed twelve pounds, at fifteen cents per pound, \$1.80, eleven hens on hand, weighing in all ninety-one pounds, worth fifteen cents per pound, \$13.65; total, \$69.45. The cost of feeding the flock has not been kept account of; the fowls have had the run of a small swampy meadow, and have fed largely upon snails, worms and young frogs, so that the corn given them has lain in the yard neglected for two or three days before it was picked up. They have certainly not consumed, all told, five bushels of corn in the year, which includes the unproductive period of their rearing. Two of the hens set twice and each brought out two broods: the broods were put together and divided among the hens, so that no one had less than sixteen chicks and only four were cooped up. The hens were set two at the same time for

this purpose. Only one chick was lost out of seventy-four hatched.

### BREEDS FOR BROILERS.

The modern poultry raisers look for size; and broilers should present plump breasts and small bones. These qualities cannot be obtained with the great Brahma or Cochin, but are met with in the game, Leghorn and Dorking of the English, and the Crevécours, Houden, and La Fleche of the French varieties. An important point is to produce an early feathering breed, as then maturity will come in a degree sufficient for the early chick. The bone of the Cochin is too heavy, and the feathering is too tardy for the early chicks, but they do admirably for roosters. The Plymouth Rocks are better adapted for this purpose, as they are smaller fowls, the Dominique blood giving them more early qualities. The little French Dominiques, a dark, plain fowl, are admirably fitted for this business, as they are always of short, plump body, and make rapid growths, the feathering and maturity keeping equal pace. They are also good fowls to produce eggs, but are more uncertain than the Leghorn for all seasons, all climates and under all circumstances. Hamburgs are great egg producers, like the Spanish, but are white skinned, which is oftentimes an objection.—*Country Gentleman*.

### WINTER CARE OF FOWLS.

In building a hen-house, the requirements of the fowls are always to be considered, these are warmth, light, fresh air, an earth floor and sufficient space to avoid crowding, and allow of freedom, as a hen will not do well at laying unless she is contented. Hence, there must be space, not only in ground surface for freedom, but height for better ventilation as well, the windows so arranged and of number and size, as to admit copious air in summer. There are needed in winter a row of low windows on the south side for light, doubling the sash in winter, this is necessary for warmth, and does it effectually, as it forms a dead air chamber, single glass admitting cold without any benefit from the air. If the building otherwise is well fortified against the cold, and double sash well fitted is used with dry earth floor, fowls will do well if a good breed for winter laying, like the Asiatics, and well taken care of, the care to be constant, and required more in winter than in summer. Fresh water must be supplied with a variety of food, including occasional feeds of vegetables and meat of some kind, corn being the principal grain, affording heat as well as substance for eggs.—*Country Gentleman*.

Fowls at this season should have their liberty as much as possible, be fed but moderately with corn, for it is too heating and fattening, and be compelled to forage for a part of their living. It will do them good to glean the wheat fields and scour the hay fields for insects. Exercise is as healthful in summer and fall as in winter. Care should always be taken, however, to have some shelter from the sun provided; and also to have a bountiful supply of water within their reach.

Bees need management just as much as horses, cattle, sheep, poultry, or any other kind of farm stock. What profit would you derive from your farm stock if left to themselves? Very little could be expected; precisely so with your bees. We do not hesitate to say, because we know from actual experience, that there is a profit derived from keeping bees, which is just as sure as the annual product of an intelligently managed farm or garden, but a person must have some adapta-

tion and taste for them, and become thoroughly posted and acquainted with the nature and instinct of the honey bee, and then have a hive that will admit of access to them, so that they can control them.

Dr. M. MAHIN, of Huntington, Ind., in an article in the *Bee keeper's Guide*, on the Best Bees, gives it as his opinion, that "the Syrian or Holy Land bees are greatly superior to either dark or light Italians." Then he adds: "In one thing I have been disappointed in them, and that is their want of uniformity in colour. I presume that Mr. D. A. Jones [our Canadian Bee King] procured bees from different parts of Palestine and Syria, and that they differed in colour, and the crossing of these varieties produces the variation in colour in the progeny of the same queen. Mr. Jones deserves the everlasting gratitude of the bee keepers of North America for introducing these bees, and not only their gratitude but their patronage. I am so well pleased with them that I propose to Syrianize my whole apiary within a year or two if I live."

The approach of Thanksgiving suggests to our mind how very careless the major portion of our farmers and suburban poulterers are, when they have every facility to raise turkeys every year for market, but after all fail to do so. Ducks and geese of the improved breeds are profitably raised on many farms. If a supply of water can be given them, all the better. Good feed is more important than water to swim in and fish for bugs. The Rouen duck stands pre-eminent among ducks were size is the consideration; the Aylesbury drake sometimes attaining equal size, but the Aylesbury or any other duck seldom does. The white China geese have their admirers, for they have merits of no mean order, though for size the Toulouse geese are preferred to the former, while the Embden or Bremen have many enthusiastic friends.—*Western Agriculturist*.

The following hint from our good friend of the *American Bee Journal*, is in order. But we submit the rule should be extended, so as to take in every department of rural affairs, in writing upon which men are apt to differ. Correspondents of the *RURAL CANADIAN*, we feel certain, will ever bear this in mind:—Honest discussion of every theory in bee keeping is to be desired and courted, but such discussion should never descend to unkind personal remarks. We admire the sentiment expressed in the following from one of our exchanges: "Discussion has for its true object to elicit truth. When this is the object sought after, it is profitable to hear both sides of the argument. But when the argument becomes interlarded with low personalities, honourable men withdraw from it and leave the field to the hero of the hour. He stands alone in his glory."

SOMETIMES an ounce of prevention is worse than a pound of disease. One day last week the children came running in, shrieking that a big hawk was circling over the poultry-yard. Old farmer Thistlepod dropped his paper, caught his trusty gun from the rack, charged for the poultry-yard. He ran right over a bee stand just the other side of the cypress bush, and was stung in thirty different places before he jumped over the fence of the poultry-yard, alighting upon the old black hen that was brooding thirteen chicks, breaking her neck, and mashing five of the hapless "weeies;" the gun caught in the fence as he jumped, and went off, killing a young turkey, and filling the Durham heifer in the meadow nearly full of buckshot; while the hawk, alone calm and self-possessed in the midst of the tumult and confusion, sailed gracefully away with the one spring chicken he had all along intended to levy on.—*Burdette*.



*Flowers are love's truest language.*—PARK BENJAMIN.

GOD might have bade the earth bring forth  
 Enough for great and small,  
 The oak-tree and the cedar-tree,  
 Without a flower at all.  
 He might have made enough, enough  
 For every want of ours;  
 For luxury, medicine, and toil,  
 And yet have made no flowers.

Our outward life requires them not—  
 Then wherefore have they birth?  
 To minister delight to man,  
 To beautify the earth;  
 To comfort man—to whisper hope,  
 Whene'er his faith is dim;  
 For whoso careth for the flowers,  
 Will much more care for H'm!

—Mary Howitt.

## HOME CIRCLE.

## A TALE OF RUSSIA UNDER NICHOLAS I.

In one of the splendid palaces of the Russian capital, a fair young girl threw herself upon the crimson cushions of a divan in the embrasure of a large window. Alarm and anxiety were depicted on her features, and she constantly clasped and unclasped her small hands, and nervously arose and looked out into the street, and then reseated herself as if waiting for some painful intelligence. It was the fair young Natalie Radetski, the beauty of the Russian court, upon whom nature and fortune had showered every gift, and for whom even the stern features of the Emperor Nicholas would relax into something like a smile as he looked upon her beauty and grace.

Hastily the door opened, and a young man advanced towards her.

"I am to bid you farewell, Natalie," he said in a voice broken by emotion.

"Oh, Alexis! what is it?" cried the young girl.

"I have displeased the Emperor, and he has ordered my arrest."

"The Emperor will pardon you—I will go to him," said she. "He will not refuse me. He has always been so kind to me."

"Alas! my Natalie. He will refuse you this. The Emperor believes me concerned in a conspiracy, and he never forgives. I am innocent, but he will not believe it. I know not what is to be done with me; but if I am sent to Siberia—"

"To Siberia! Oh, Alexis! it cannot be—it cannot be!"

For a moment neither spoke. At length, with a powerful effort at self-control, the young man said, "Natalie let me place this ring upon your finger, and promise me that you will wear it always in memory of what my love has been to you. The Emperor will force you to marry. I do not wish the thought of me to make you always wretched."

He placed upon her finger a ring, in which was a single emerald of great brilliancy.

"Do not take it off, nor read the inscription, till you hear certainly that I have been banished," he said. A shiver of horror ran through her frame, but he went on firmly: "Then read it; it will comfort you. Now I must go. The Emperor allowed me this interview, and the guards are awaiting me."

He clasped her convulsively to his breast, kissed her brow and lips, and laying her gently upon the divan passed out. In the street the guards awaited him.

The words of her lover did not deter Natalie from attempting to save him. She sent a petition to the Emperor, imploring an interview; but it was denied her. She waylaid the Empress.

"My poor child," said the Empress, kindly, "I would gladly take you to the Emperor, even at the risk of incurring his displeasure; but it is too late. Alexis Potemkin has been sent to Siberia for life."

Natalie heard it not.

"Lift her up," said the Empress; "she has fainted."

But Natalie had not fainted. Slowly, but resolutely, she rose, and made a gesture of respectful submission to the Empress, begged leave to retire.

When Natalie reached her own apartment, she drew from her finger the ring that Alexis had placed upon it, and read the inscription carved upon the inside in French—"Death is the only consoler," it said. "We shall meet in heaven!"

There is no place more dreary, more terrible, even in imagination, than the mines of Siberia.

Among the condemned, in a large quicksilver mine in the very heart of the country, thousands of versts from St. Petersburg, stooped at his daily toil a form whose tall and noble proportions even his coarse habit scarcely shrouded. His delicate frame, unused to labour, and exposed to the rigour of an Arctic climate, soon yielded to the unhealthiness of his occupation; and he was fast sinking under his trials. Yes, death would come, gentle death—and his heart leaped with a momentary joy.

The struggle was not long. A few days of confinement to a hard pallet, a few nights of suffering, and the fiat, which even an imperial decree could not stop, went forth. The victim was released.

Three months after this, the Grand Chamberlain of Russia, presented himself before Mlle. Radetski, and summoned her to the presence of the Emperor.

When conducted to the palace, His Majesty dis-

missed the gentleman-in-waiting, and signed her to approach. His stern features were contracted by an expression of deep displeasure.

"Why does Mademoiselle Radetski wear mourning?" he said. "Does she mourn for conspirators who would subvert the Government and bring destruction upon their country?"

"No, sire," she answered. "I wear mourning for one whom your Majesty saw fit to condemn, but to whom, by your express command, I promised my hand."

"We will not discuss the past," replied the Czar, coldly. "I sent for you for a different purpose. I have chosen a husband for you."

"Mercy, sire!" exclaimed Natalie, clasping her hands imploringly. "Do not force me to marry."

"Force, mademoiselle! that is an ugly word. I, your Emperor, recommend your acceptance of the suit of a young nobleman of high rank. There are reasons of state which make me expressly desire this marriage. And, Natalie," he added, his harsh tone and manner softening visibly, "grief should not be eternal. Life is not given us to waste in idle sorrow for what is irremediable; and new ties will bring you solace, and, in time, happiness."

As she pressed her hands to her bosom, in a momentary spasm of pain, he observed the glittering emerald that encircled her finger.

"So splendid a jewel is hardly befitting a mourning garb, Mademoiselle. May I see the ring?"

Poor Natalie murmured faintly, "Your Majesty will not take it from me?"

"I will return it," replied the Emperor, as he examined the inscription. "Death, the consoler!" he murmured to himself. "Yes, death is the great healer and comforter."

His rigid features relaxed into an expression of deep pity as he remarked her wasted appearance and pallid features; but nothing of this was perceptible in his tone as he said, "It is my will, Mademoiselle, that you should be married a month from this day. The time will come when you will thank me for this decision. You can now retire."

As soon as Natalie had left, the Emperor rang his bell for Dr. Seckendorf, his favourite physician.

"Seckendorf," said the Czar, "go and see Mademoiselle Radetski. Find out if she has any organic disease. Return here and report, but say nothing of what you observe to any one else."

In a few hours Dr. Seckendorf was again admitted to the presence of the Czar.

"How is your patient?" inquired Nicholas.

"I fear very ill, your Majesty. She has aneurism of the heart."

"Is there any immediate danger?"

"There may not be, if she is not excited. But violent agitation or grief may prove fatal."

"What has caused the disease?"

"Her constitution has always been frail; but I think—," here he hesitated.

"Say what you think," said the Czar, impatiently.

"Then with your Majesty's permission, I think that the sentence of Count Potemkin was her death-blow."

The Czar paced his cabinet impatiently. "She will get over it, Seckendorf. A happy marriage will make her forget all that. There is nothing like happiness for a woman's health."

"I do not presume to contradict your Majesty, but I doubt whether Mademoiselle Radetski is able to bear either happiness or sorrow very long."

The Emperor dismissed his physician, after enjoining him to visit his patient daily. In the meantime the preparations for the marriage went on. A costly *trousseau* was provided for the bride, and all the beauty and rank of the capital invited. The Emperor himself was to grace the ceremony with his presence.

But still Dr. Seckendorf visited his patient, and his face grew grave as he looked at her.

One morning he reached her mansion at a later hour than usual. Her attendants informed him that their mistress had not yet rang her bell, and they hesitated to disturb her. He went at once to her apartment. The attendants drew aside the curtains of the bed. With one hand supporting her head, which rested upon the pillow, lay the pale sleeper, less brilliantly beautiful than when, with proud step and careless grace, she trod the gorgeous salons of the capital, but far more lovely.

Death, the consoler, had stooped to kiss his

victim, and had not disturbed the peaceful smile that rested on her lips. In her hand she held the ring, which she had taken from her finger, and she had passed away while reading its inscription.

Gently Seckendorf replaced it upon the marble finger, from which it was never more to be taken.

"Truly," he murmured, "for her, Death is the consoler."

## A DAUGHTER WORTH HAVING.

"Harvey Mills has failed!" said Mrs. Smithson one chilly spring evening, as she ran in to see her next-door neighbour and intimate friend, Mrs. James. "My husband just came home, and he says that what we supposed to be a rumour only is a sad fact; the assignment was made yesterday. I throw on a shawl and ran right over to tell you. They are to keep the house under some sort of an arrangement, but they have discharged all their servants, and what in the world the Mills's will do, Mrs. James, with Mrs. Mills's invalid habits, and Miss Helena with her dainty ways and refined bringing up, is more than I know;" and pretty, shallow Mrs. Smithson looked at her nerve-loving friend and neighbour with the air of an epicure regarding some favourite dish.

"I heard all about it late last evening," said Mrs. James, adjusting the pink ribbon at the throat of her black silk dinner-dress, "and this morning I presumed upon our cousinship so far as to drive over and see how they were getting along. And really, Mrs. Smithson, you will be surprised when I tell you that, although I expected to find the family in great confusion and distress, I never saw them in such a comfortable way, and in such good spirits. The worst was over, of course, and they had all settled into the new order of things as naturally as could be. My cousin, Mrs. Mills, was sitting, as calm as you please, up there in her sunny morning-room, looking so fresh and dainty as she ate her crisp toast and sipped her coffee."

"Our comfortable and cozy appearance is all due to Helena," said she. "That dear child has taken the helm. I never dreamed she had so much executive ability. We were quite broken down at first, but she made her father go over all the details of business with her, and they found that by disposing of Helena's grand piano, the paintings, and slabs, and costly bric-a-brac her father had always indulged her in buying, we could pay dollar for dollar, and so keep the house. My husband's old friend, Mr. Bartlett, who keeps the art store, you know, and who has always taken a great interest in Helena, bought back the paintings, statuary, vases, etc., at a small discount, and Baker, who sold us the piano a year ago or so, and who is another old friend, and knew, of course, just how we were situated, took it back, deducting only twenty-five dollars."

"Helena has just gone into the kitchen. What she will do there I don't know, but she says she needs the exercise, that she has not attended the cooking-school here in the city for nothing, and that, so long as the meals are served regularly and properly, and the house is kept in good order, her father and I are not to worry." After she told me that, I drew my call to a close, and ran down into my cousin's kitchen to see her dainty daughter there. And what do you think? I found the girl at the sink, with her sleeves rolled up, an immense waterproof apron on, washing a kettle!"

"Washing a kettle!" repeated Mrs. Smithson, holding up both her soft, white hands in unmeasured astonishment.

"Yes, Mrs. Smithson, washing a great, black, greasy iron kettle that meat had been boiled in, and that had been left unwashed and gummy when the cook left. And, do you know, she was laughing over it all, and saying to her youngest brother, who stood near by, that she really liked it, for she now felt she was making herself useful."

"The idea! liking to wash kettles!" and the two fine ladies looked at each other in open-eyed wonder.

"It seems to me as if Helena Mills was trying to make the best of her father's altered fortunes, and was simply doing her duty in the premises," spoke Miss Carlton, Ida James's new drawing-teacher, who was that evening engaged in giving her pupil a lesson on the opposite side of the centre-table. She spoke earnestly and yet in a modest way, and it being the vogue in New City just then to patronize Miss Carlton,

the pretty, accomplished graduate from Vassar, the two ladies looked at her amiably, and she went on:

"Somebody must wash the kettles, and it is always best, when one has a disagreeable duty to perform, to do it not only at once, but cheerfully."

"Yes, perhaps," replied Mrs. Smithson, "but how could a young girl of real native refinement" (both sides of the Smithson family were of the "old stock") "take so kindly to washing pots and kettles? The fact of it is, people have been mistaken in Helena Mills. She never possessed that innate gentility she has credit for. But every one finds their own level sooner or later."

These two women having thus summarily disposed of Helena Mills socially, they repeated their belief that the lovely and dutiful young girl had now found her proper level over and over in their set, until it was the common talk in New City.

Miss Carlton, in her round of professional calls among the so-called *elite*, was entertained in nearly every household with the information that Helena Mills had given up her studies oven, and gone into the kitchen to work—"and, if you'll believe it, she likes it!" Then would follow reflections upon the natural ability and bias of mind of a young woman who was "fond of washing dishes."

This sensible, accomplished little drawing teacher was the only one to be found, who mingled in the "upper circles" of New City, who said a word either in praise or defence of Helena Mills's new vocation.

Miss Carlton always and everywhere protested that the young girl's course was not only praiseworthy, but beautiful. She maintained that every woman, young or old, high or low, who took upon herself the labour of elevating the much-abused as well as deposed vocation of housework—upon which the comfort of every home depends—to a fine art was a public benefactor.

Miss Carlton's friends all listened and laughed, and then went on with their senseless and malicious tirade. She was heartily glad when her engagements in New City were ended, and she was no longer obliged to move in such "select" society, whose ideas were always a mere echo of opinions—no matter how trivial and foolish—which had been expressed by a few of its more wealthy members.

Mrs. Dr. Forbes, *nee* Miss Carlton, had heard very little about New City society for five years. But having occasion to pass through the place on the cars lately, she treated herself to a little gossip chat with the conductor, whom she had known as a New City gallant.

"There is no particular news, Mrs. Forbes," said he, "unless it is the engagement of Helena Mills to young Lawyer Bartlett, son of Col. James Bartlett, you remember, owner of the big corner art store. A capital choice the young squire has made, too. She's as good as gold, and everybody says she's the best girl in the city. She's a perfect lady, withal, and treats everybody well. Why, bless you, Mrs. Forbes, when her father failed in '75, she took entire charge of the family, and she has managed the house ever since."

"Her father is now in business again for himself, and employs more men than ever. Her mother, who had been an invalid for years, was forced by Helena's example to try and exert herself so as to share her daughter's burden to some extent. As a result of the new, active life she has followed, she lost all ailments, and is now a happy, hearty, healthy woman. Helena's brothers have grown up to be fine, manly, helpful fellows, and the whole family are better off every way than ever before. As things were going on before Mr. Mills's failure, the whole family were in danger of being spoiled by too much luxury."

"There was a great deal of talk at first among the big-bugs about Helena's 'pots and kettles,' and they used to say she had found her true 'level.' I always thought there was a spice of malice in their talk, for the girls envied her beauty and accomplishments. I am rather fond of telling them now that Helena Mills has found her 'level' in the richest, most influential, and just the best family in New City."—*Christian at Work.*

NEARLY all the farmers of Iowa who have been troubled by the cyclones of the past season have provided against future loss of life by digging outside cellars, into which they and their families may retire in future possible similar emergencies.

## OVER THE WIRES.

I hear a faint, low singing,  
Like the sound of distant choirs;  
'Tis a message gleefully winging  
Over the telegraph wires.  
And what are the glad wires humming,  
As they stretch in the sunlight away?  
"I am coming, coming, coming—  
I am coming home to-day!"

And now I hear a sobbing,  
Like some soul sitting alone,  
With a heart that is wearily throbbing,  
And lips that can only moan.  
Oh! what are the sad wires sighing,  
As they reach through the darkness of night?  
"He is dying, dying, dying—  
Come on the wings of light!"

The titillation of laughter  
Next falls upon my ear,  
And a burst of mad mirth after,  
Like a sound of a distant cheer.  
And what is the gleeful story  
That the round fire spreads afar?  
"Our nine is crowned with glory—  
Hip, hip, hip, hurrah!"

Oh! what are the wires relating,  
Morning, and noon, and night?  
"The market is fluctuating!"  
"Report of the Senate fight!"  
"Cashier S—a defaulter!"  
"Arrest a man named Brown!"  
"Jones died to-day by the halter!"  
"Wheat went suddenly down!"  
"Dead!" "Born!" "Going!" "Coming!"  
"Deluge!" and "Drought!" and "Fires!"  
Singing, and sobbing, and humming,  
Over the telegraph wires.

THE TIME WHEN WEE JEANIE CAME:  
A SHEPHERD'S WIFE'S EXPERIENCE.

I aye mind the time; I hadna been sae weel; I was low in spirits, and dreaded her coming much. I had a sair time, but the Lord carried me through, and added another wee lamb to our flock. But monie a day had I to lie in bed. Often I was low in spirits, but aye somehow I got a lift, and got cheerie again. When they were a' out, I would lie thinking about a' our straits, and things looked black enough, for we had had much trouble.

John's mother lay lang bedfast wi' us, and we wadna have a haapenny frae the parish. No a week for many months that the doctor wasna out seeing her. Then she was scarce taen away, when our wee Johnnie took ill o' fever, and after a month's sair fecht between life and death, was also ca'd away. We were deep in the doctor's debt, and I thought o' a' the time the kind man waited on me. The miller also had an account standing against us, that we couldna settle last term. Then, to make things waur, the spring had been very brashy and cauld, and monie o' the lambs dead, and those which lived were but smally.

Weel, one afternoon, as I lay thinking about a' these things which seemed sae sair against us, I couldna help greeting, and I was sae weary and sad, that I thought if it wasna for John, and the bairns, and this wee lammie in my bosom, I wad like to dee and be at rest. As I lay wi' the tears running owre my cheeks, I could hear John away out on the hillside crying to Rover the dog, and it minded me o' the happy time when he cam courting me, when the sound o' his voice made me sae glad; and I thought how wrang it was to wish to leave him, puir man to fecht on alane. Somehow also the distant cry o' the whaups, and purling o' the bit burn at the bottom o' the yard, running doon among the rocks, cheered me. I thought the bird-cries coming away owre the muir and that purling o' the burn very sweet music. And my mind wandered away to heaven, and I thought o' the saved a' safe there sounding their golden harps. Then the wind cam whushing and whushing round by the house corner, between the house and the auld thorn tree; and the lang branch, that the last storm nearly broke away, cam tapping and tapping at the window beside my bed, and this did me maist guid o' a', for I was minded o' the last sermon I heard our minister preach, on our Lord's words, "Behold, I stand at the door and knock: if any man hear my voice, and open the door, I will come in to him, and will sup with him, and he with me." And I thought surely the Lord was knockin' at my door, in a' this trouble, and wanting to have a constant place in my heart.

Then I got a wonderful outgate, and the Lord Himself cam in, and I found sweet rest in Him. He

calmed my sair troubled heart in a way I never felt before. And He brought to my mind the texts my auld grandfather taught me, when I was a bit lassie: "Cast thy burden upon the Lord, and He shall sustain thee." "I will never leave thee, nor forsake thee. So that we may boldly say, The Lord is my helper." Weel, I have read in Boston's Life, and in Elizabeth West's, and in those of ither believers in Jesus, o' the happy times they sometimes had, and how they were feasted at the King's table, and saw His kind face, and heard His words of love, but I never could say that I kend anything o' such an experience till then. It was to me a real time o' love. The Lord surely cam very near, and sae lifted up my heart, that I got aboon the thought o' a' my troubles, and I cried out, like David, "I will go in the strength of the Lord God."

My heart was made glad, and it was better to me than a' medicine. I soon got weel, and the doctor wadna hear o' sending in his account for monie a day, but we aye sent him something as we would. The lambs also brought a higher price in the market than we expected. Wee Jeanie also has thriven nicely, and looks up, the wee lamb, in my face and laughs in such a happy way, that she makes me laugh wi' joy, and aye leads me to think of the Lord's love to me when I sae low and sad.

We may hae much o' life yet before us, and I ken that this life is full o' trials, but I learned a lesson then which I can never forget, which will carry me through a': no to fecht wi' trials in our ain strength; far less to lie down and greet, as if a' hope were gaen, but to carry them a' to Him who will never desert His people in the time o' their need. Yes, the time when Jeanie cam, was a time when I had to sow in tears, but the harvest soon cam, when I reaped wi' joy. Weel may I mind it then, a' through this life, until I get where poortith and sorrow never come.

## GOOD ADVICE.

Mr. R. S. Burdette, he of the *Hawkeye*, gives the following advice to a young man:—

"My son, when you hear a man growling and scolding because Moody gets \$200 a week for preaching Christianity, you will perceive that he never worries a minute because Ingersoll gets \$200 a night for preaching atheism. You will observe that the man who is unutterably shocked because F. Murphy gets \$150 a week for temperance work, seems to think it is all right when the barkeeper takes in twice so much money in a single day. The labourer is worthy of his hire, my boy, and he is just as worthy of it in the pulpit as he is upon the stump. Is the man who is honestly trying to save your soul worth less than the man who is only trying his level best to go to Congress? Isn't Moody doing as good work as Ingersoll? Isn't John B. Gough as much the friend of humanity and society as the bar-tender? Do you want to get all the good in the world for nothing, so that you may be able to pay a high price for the bad? Remember, my boy, the good things in the world are always the cheapest. Spring water costs less than corn whiskey; a box of cigars will buy two or three Bibles; a gallon of old brandy costs more than a barrel of flour; a 'full hand' at poker often costs a man more in twenty minutes than his church subscription amounts to in three years; a State election costs more than a revival of religion; you can sleep in church every Sunday morning for nothing, if you are mean enough to dead-beat your lodging in that way, but a nap in a Pullman car costs you two dollars every time; fifty cents for the circus, and a penny for the little ones to put in the missionary box; one dollar for the theatre and a pair of old trousers, frayed at the end, baggy as to the knees, and utterly bursted as to the dome, for the Michigan sufferers; the dancing lady who tries to wear the skirt of her dress under her arms and the waist around her knees, and kicks her slipper clear over the orchestra chairs every night, gets \$600 a week, and the city missionary gets \$600 a year; the horse-race scoops in \$2,000 the first day, and the church fair lasts a week, works twenty-five or thirty of the best women in America nearly to death, and comes out \$40 in debt. Why, my boy, if you ever find yourself sneering or scoffing because once in a while you hear of a preacher getting a living, or even a luxurious salary, or a temperance worker making money, go out in the dark and feel ashamed of yourself, and if you don't feel above kicking a mean man, kick yourself. Precious little does religion and charity cost the old world, my boy, and when the money it does give is flung into his face, like a bone to a dog, the donor is not benefited by the gift, and the receiver is not, and certainly should not, be grateful. It is insulted."

## YOUNG CANADA.

## SOMETHING TO DO.

Think of something kind to do,  
Never mind if it is small;  
Little things are lost to view,  
But God sees and blesses all.

Violets are wee, modest flowers,  
Hiding in their beds of green;  
But their perfume fills the bowers,  
Though they scarcely can be seen.

Pretty bluebells of the grove  
Are than peonies more sweet;  
Much their graceful bloom we love  
As they blossom round our feet.

So do little acts we find,  
Which at first we cannot see,  
Leave the fragrance pure behind  
Of abiding charity.

JUDY'S PUPPY. FOR WHAT HE WAS  
SAVED.

"Carl, what is the matter with Judy? She's been whining and begging us to go to the shore for the last half-hour," said Marion Chase to her brother, who was stretched full-length on the floor, reading.

Carl looked up, listened a moment to the big dog's pleading, then closed his book and said with an evident effort to give up his own pleasure to gratify his dumb friend:—

"Poor old girl, she's in some trouble, that's plain! Come, Marion, put on your hat and we'll humour her."

Marion, who never refused a walk on the sands, no matter in fair or stormy weather, was soon equipped, and the children followed their dog, who tried to hasten their steps, running far ahead and then coming back.

"What a high tide! 'Haven't seen the likes in ten years!' as old Sim would say," said Carl, "Hurry, Marion, Judy has got her nose in those rocks—there's some animal she wants to get at in there! Whatever it is it'll be drowned unless it can swim, and anyway unless it can squeeze out."

Bounding over the rocks and sand, Carl reached the crevice first, and with a short exclamation pulled out—a little puppy. His sister was by his side, and Judy with short, happy barks let them talk as they pleased.

"So that is where she hid her little one! Poor old Jude! she thought father would take this one as he took two of 'em. And you see, Marion, she couldn't get the little thing out—it got wedged in and this high tide frightened her—she knew her baby would be drowned."

The children and dog stood on the rocks, the poor mother nursing and fondling her little one, the boy and girl watching her contentment with great pleasure, for Judy had been their constant playmate and companion ever since Marion's second year.

"Wouldn't it have been just dreadful if she had lost her little doggie!" said Marion. "I do believe she would have stayed by it till she herself was drowned. You see the tide was never so high—O Carl, Carl, we are lost!"

It seemed true at first, for while the children and dog had lingered on the rocks the treacherous waves had crept round them till water surrounded them on every side and the heavy surf threatened to roll even over their feet.

Carl started up, and seizing his sister's hand, said: "Not a moment, Marion, you must not

mind the surf—even if it knocks you down—it is our only chance. Judy will save you at any rate, and I can swim."

"But Judy has her puppy," said Marion with white lips, for she was always a coward in the surf. Carl seized the puppy, and Judy, seeming to understand, kept near Marion. After all, there was not so much danger, though Marion fell twice and was dragged back by a receding wave. In fifteen minutes the children stood, panting and wet, but safe and beyond any possible tide.

"Carl, what did you think of as we ran?" asked Marion in an awed voice.

"Oh, of you and the puppy and—well, I did think how mother'd feel;" this last was added in a shame-faced way.

"I could only say over and over, 'When thou passeth through the billows I will be with thee.' I know He was, Carl."

Carl looked at the pale lips of his only sister, and with a heart full of real gratitude that she was spared said quietly, "Yes, I know He was—always know that when she's near," he added in his heart, for Carl thought this one sister almost an angel, and never teased and bullied her as some boys do their sisters.

"O little puppy, I wonder what your life has been saved for?" said Marion, taking the little dog for a moment, but quickly putting it down, for she felt faint and weak.

Ten years went by. Marion, a woman of twenty two, seemed older than Carl, a young man of twenty-four, for she had been married for two years, and, as she wrote to her brother, "was bringing him the dearest little nephew—just another Carl." She had lived in India with her husband, but was to spend a few years in her old Scottish seaside home, and now the vessel in which she was to come was hourly expected. How Carl watched the winds and tides! A storm came up, and the ship must be on the coast! The young man and his father were on the rocks before dawn, and in the darkness they heard the guns of a ship in distress. They knew that in all probability it was the "Albatross," and their darling with the little one they had never seen, was to drown perhaps, almost in their sight.

Suddenly a sheet of flame lit up the sky. The ship was on fire, and men and women could be seen throwing themselves into the sea. Boats are launched, and Carl started the first one. It was a great risk, but no one cared for danger; all knew "Miss Marion" was in the ship. Nearer and nearer came the boat; now sunk in the trough of the sea, they could see nothing, and again high on some wave they saw, still far ahead, men, women, and children struggling in the angry waters. Each time some had disappeared, O God, would they save her?

Suddenly a small, black object is seen coming towards the boat. It is a dog, and some one is swimming by his side, while there is something on his back.

"Marion! it is she! Here, Hero! here, old fellow!"

But Judy's puppy had seen the boat far off and was by their side before they needed to call. The baby, half-drowned, but saved, was dragged in the boat, and Marion, who

had yielded to her father's wishes years before and learned to combat waves and surf, was soon in her brother's arms.

"It was Hero who saved us. How little we children knew what we were doing ten years ago," said Marion faintly, but with a happy quiver in her voice as she saw her baby reviving.

"And this time I thought who was with you, darling," whispered Carl, "and knew that even though you drowned He would keep you safe. Ah, darling, it was you roused me up to succour Judy when I was a boy. You deserve that her puppy should save your little one."—*Christian Chronicle*.

## SPENDING MONEY.

Lawrence and Fred are cousins. Their fathers are neither rich nor poor, and the boys are growing up under good influences, in good schools, with good parents and friends to help them along, and at least a head belief in a good Heavenly Father who loves them and is seeking to lead them in the right and true way.

But one of these boys has already started on a course that, we fear, will lead him into trouble. Let us see if we can find the point where the two paths separate.

These boys have each a weekly allowance of spending money, with which they are to do exactly as they please. It is not much, to be sure, but it is their own, and is paid to them regularly at the beginning of each month.

Lawrence knows from month to month what he wants to buy with his money. Sometimes, in order to make his purchase, he has to save for two or three months, and this he does, without any difficulty.

When he buys (it is always with his mother's approval), it is sure to be something of real use. Sometimes, not always, it is a book. He has some good games, two or three pretty pictures for his room, a scroll saw, and quite a number of tools, to say nothing of pencils, drawing paper and paints, for Lawrence has an eye for colour and form. He has gathered these things gradually, and during the four years that he has had "an income," he has made but two or three unwise purchases: His money is not all spent upon himself, either, but a good many thoughtful gifts have been made from his store, to which he is constantly adding by his own labour.

Fred, on the other hand, is almost always out of money, and often gets into debt. He says that money will not stay in his pocket! That is true, because he will not let it. He spends it for root-beer, nuts, and candies, picture papers of a doubtful sort, marbles, and such like, and he is always wishing that he could have more money, so as to buy tools and books as Cousin Lawrence does. But he wouldn't buy them if he had, for he has learned to use his money in gratifying his whims, and it is very easy to see that he is already in the power of a habit that will grow upon him.

Look out, boys and girls, for your pennies and dimes. As you spend money now, you will be very likely to do when you are older. Think of the future when you buy! Look ahead, and ask: "Will this do me, or others, any good?"

**Scientific and Useful.**

**APPLE JELLY.**—Boil till it becomes a perfect jelly one pound of moist sugar, one pound of apples, the juice of one lemon. Let it stand in a mould till quite firm and cold.

**SEA FOAM.**—Whites of ten eggs beaten to a stiff froth, one-and-one-half cups of sifted sugar, one cup sifted flour, one teaspoonful cream tartar; put into rings and bake quick.

**SPICE CAKE.**—One-and-one-half cups butter, three cups sugar, one cup sour milk, five cups flour, five eggs, one teaspoon soda; cinnamon, cloves, nutmeg, allspice, each one teaspoon; one pound raisins.

**APPLE TOAST.**—Pare and core tart apples without breaking them, put them on slices of stale bread, fill them with sugar, put a little butter and spice on each one, and bake them tender in a moderate oven.

**LEMON PUDDING.**—One pint of sweet cream; six eggs, beaten very light. Mix with the cream one large cup of sugar, grated rind of two large lemons; juice of one lemon. Line the dish with paste; pour the mixture in and bake.

**FRUIT PIE.**—One cup of sugar, one-half cup of butter, two eggs, one-half cup of sweet milk, two cups of flour, two teaspoonfuls of baking powder. Bake in layers and spread thick with any kind of jam. Frost the sides and top.

**CRAB APPLE JELLY.**—Put the apples in a pan and mash well; then let them simmer in a preserving kettle twenty minutes; strain through a jelly bag, and to a pint of juice allow a pound of sugar; let it boil ten minutes and then pour into jars and place in a dark, dry place.

**APPLE MARMALADE.**—Pare, core, and cut in small pieces any kind of sour apples, and to every pound put three-quarters of a pound of sugar; put them in a preserving pan and boil over a slow fire until they are reduced to a pulp; then put them in jelly jars, and keep in a cool place.

**APPLE AND BREAD PUDDING.**—Soak a quart of stale bread in cold water five minutes; pour off as much water as will escape without squeezing, and put the bread in a buttered baking-dish; pare and slice a quart of apples, lay them on the bread, add sugar and spice to taste, and bake the pudding in a moderate oven.

**CANNING CORN.**—The corn is first cooked for five minutes; it is then cut from the cob and put into the cans, and the covers are soldered down. A small pinhole is made in the cover, and the cans are put in the boiler and boiled steadily for an hour and a half. The cans are then taken out and wiped dry, and a drop of solder is put on the air-hole. In this way there is no trouble about putting up sweet-corn so that it will keep.

**GERMAN CRISPS.**—Two cups sugar, one cup butter, the rind and juice of one lemon; mix thoroughly, either with a spoon or with the hand, adding sufficient flour to make them thick enough to roll out; roll very thin and cut in small cakes with a cutter; after placing in a pan rub the tops with eggs and sprinkle with white sugar; two eggs are enough for the tops of the cakes; they only require a few minutes to bake.

**GREEN TOMATO CATSUP.**—One peck tomatoes, six pods red peppers, or one teaspoonful pulverized, four tablespoonfuls salt, four tablespoonfuls black pepper, one tablespoonful of mustard, one tablespoonful ground cloves, one tablespoonful allspice, two quarts white wine vinegar; cook tomatoes and peppers in vinegar until soft; then strain, adding all the spices, and boil slowly five hours; when cold, put in bottles and seal.

**WATERMELON CAKE.**—White part: One-and-a-half cups of sugar, one-half cup of sweet milk, whites of three eggs, two teaspoonfuls of baking powder, two rounding cups of flour. Red part: One cup red sugar sand, one-half cup of milk, one-fourth cup of butter, yolks of three eggs, one cup of raisins chopped not too fine, two teaspoonfuls of baking powder, two cups of flour, to be baked in a large dish; put the red in the centre and the white around it.

**JELLY FOR THE SICK.**—Rice jelly for a sick person is very nourishing, and is very easily made. Mix two heaping teaspoonfuls of rice flour, with enough cold water to make a thin paste; add a cupful of boiling water, putting it in gradually; then let it boil until it is transparent. When you take it from the stove, sweeten and flavour it. If it is for a fever patient, flavour with lemon juice; if for one with Summer complaint, put a stick of cinnamon in it while it is boiling.

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TORONTO WHOLESALE MARKETS.

OFFICE RURAL CANADIAN, Toronto, Oct. 30th, 1882.

FLOUR AND MEAL.—The stocks of Flour in store at this port on the 23rd instant, were 1,200 bbls., as compared with 1,221 bbls. last week, and 1,800 bbls. on a like date last year. Some car lots of superior extra have been selling at \$4.75. Extra is in request at \$4.65, but is scarce; sales of Strong Bakers have been made as high as \$5, and there is little or none in market. Oatmeal—Is in light supply and hard to obtain, even for local wants, to say nothing of the demand from Lower Provinces, and now from Manitoba. We quote \$5.20 to \$5.25 per bbl., per car load, and \$5.50 for small parcels. Cornmeal—brings \$4 to \$4.25 per bbl. Bran—We quote \$11.50 to \$12, there are sales reported this week at both figures.

Stocks of grain in store at Toronto on Monday, 23rd instant, and on previous dates, were as follows:

Table with columns for grain types (Flour, Wheat, Spring, Oats, Peas, Rye) and prices for Oct. 23, Oct. 16, Oct. 24.

Total grain . 310,869 246,329 475,206

GRAIN.—Prices in Britain, in spite of fluctuations, keep at a higher level than was predicted, and American markets seem reluctant to come down. In this market several cars No. 2 Fall Wheat sold on Tuesday at \$1, and to-day holders are asking \$1, buyers offering 98c. Spring Wheat No. 1 is held at \$1.03, with \$1 offered for No. 2, and 95c. for No. 3. Farmers are holding back their wheat, refusing to be convinced that the market will not advance, in spite of the good crops nearly everywhere. Barley is selling in round lots to the United States via Oswego and via the Bridge. Not much of the new crop is No. 1, and inferior grades are commanding ready sale at relatively good prices. While No. 1 brought on Monday 79c. here, and would now probably bring 80c. No. 3 Extra brings 66c. to 68c., and No. 3 is quoted at 60c. Oats—The sample is not very good this year, which accounts for lower prices, we quote 40c. to 41c.; Peas are steady at 75c. for No. 1 and 73c. for No. 2. Rye unchanged at 62c.

HIDES AND SKINS.—The market for hides is quiet and steady, with no accumulation of stock, prices as before. Cured steers, which are scarce, bring 10c. Sheepskins we advance to \$1 to \$1.10, and although these prices are high all are taken which offer. Tallow continues scarce and high.

Provisions.—Since our last report, prices in Chicago have declined heavily. Cash Mess Pork being now \$22, and November Pork \$18.80. Stocks here are reduced to a low point, and there is considerable difficulty in filling the few orders that come in. Long clear Bacon is nominally worth 15c. There has been an active demand for Lard, and sales have been made at 16c. to 16 1/2c. for tubs and pails; as soon as any stock comes to hand these prices will decline. There is still a good demand for choice Butter, but very little being received, no export demand exists for our medium qualities, of which there are large stocks in the country. Eggs are scarce, and wanted at 20c. to 22c. Dressed Hogs are being taken on the farmers' market at 14c. to 14 1/2c., weights are still too light to be attractive to packers. Hops are still held at an unprecedentedly high price, about 60c. per lb., and country holders will not sell; the market looks easier, however, and there is a feeling that prices have been here too high. Late reports from England still agree that the hop crop in that country is one of the worst for years, and that the supply of old stock on hand is short. Continental plantations, except those of Alost, in Belgium, promise more abundant returns. To make good the deficiency, which is perhaps not so great as has been stated, dealers look to "America and California," as the London correspondent of a Manchester paper says.

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