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RURAL NOTES.

The potato crop in Nova Scotia and Prince Edward Island being exceedingly large this season, prices are expected to be quite low. From the present outlook the export trade in potatoes does not promise profitable returns.

The demand for the best draft horses is in excess of the supply. English and Scotch breeds take the lead. At a recent sale of English cart-horse stallions, at the Union Stock Yards, Chicago, 21 head averaged over \$1,100 each.

Prof. Macoun, Dominion naturalist, recently returned from Gaspé, where he secured many fine specimens of birds, Alpine and sub-Alpine plants, and sea-weeds and mosses. Of these latter he has made a collection for the Dominion Museum at Ottawa.

"What is the proper time and method of applying lime to land?" [Some prefer spring, but the prevailing opinion is that it should be put on in the fall. As it sinks in the soil fast enough without help, it ought not to be ploughed under, but only lightly covered with the harrow.]

Mr. Gideon Pitts, the old and successful breeder, is represented by a correspondent of the *Michigan Farmer* as holding the sensible view that attention to "blood, pedigree and register alone will result in a disastrous fiasco." How does this statement strike readers of the *RURAL CANADIAN*?

We shall be glad to hear often from intelligent farmers, stock-raisers, dairymen and gardeners. Nothing likely to prove either interesting or useful to any of our readers will be refused a place in these columns. We seek to make the *RURAL CANADIAN* more and more indispensable to everyone in the various important classes it seeks to represent.

From a health point of view, it is of the highest importance to breeders of horses that dams and sires should be judiciously selected. Rheumatism, rickets and the various diseases of the legs of horses known as splints, spavins, ringbones and curbs, are, in a majority of cases, the outcome of inherited weakness.

The *Country Gentleman* suggests, as an effective method of ridding lawns of weeds, the use of oil of vitriol. Have a spoonful of vitriol in a small, open-mouthed bottle, fastened on the end of a two-foot handle, dip the bruised end of a small rod in it and touch the heart of a weed, or of three or four successively before dipping again, and they are done for.

Mr. MATTHEW HADWEN, of lot 16, concession 7, Culross, whose farm adjoins the village of Teeswater, writes that he has this year raised and harvested off an 18-acre field, after summer fallow, the large quantity of 880 bushels of fall wheat. There were about eleven hundred stocks of twelve sheaves each, which took sixty-four waggon-loads to draw in, and two and a half day to thresh by a ten-horse power. This gives a little over 46 bushels per acre. Mr. Hadwen says: "Let Manitoba beat that if it can."

Despite the frequent complaints made against wire fencing, especially against the different styles of barbed wire, its use is rapidly increasing, not only in the districts where there is little timber, but in many elsewhere, on account of its comparative cheapness, and the ease with which it can be put up. However, we consider such a fence dangerous where fine stock of horses and cattle are kept, unless there be a top rail of wood put on—say, a 2 x 8 piece. This gives the stock an opportunity to see the fence and avoid it.

Wool merchants complain of the great lack of care among the growers in putting up their wool, and offer many suggestions as to its proper preparation. Yet so long as buyers arbitrarily fix two grades, washed and unwashed, with a certain price on each grade, dirty or clean, just so long will farmers be careless in putting up their wool for market. When buyers are willing to discriminate by paying extra prices for clean, well-assorted lots, then they will find the wool-growers ready to accommodate them.

The Secretary of the Ontario Bureau of Industries, Mr. A. Blue, Toronto, has issued a circular to correspondents, announcing that the last monthly report of the Bureau will be issued about the 1st of November. It will contain tables of all agricultural statistics collected during the year, revised and corrected according to the latest data, a summary of the progress of fall work, the condition of live stock, and other information of special interest to the farmers of Ontario. A full report on the subject of underdraining is called for. The intelligent part taken by correspondents in the work is gracefully acknowledged.

It always pays to read about what others do, and say, and think, in the same line of work or business. If one does not find direct information specially applicable to his own work, yet the thoughts and methods of others incite new thoughts and plans in the reader's own mind, that lead to profitable results. The reading, thinking man makes his head help his hands. Brains tell everywhere, and in nothing more than in farming, gardening and housekeeping. And

the fewer brains one has, or thinks he has, the more anxious should he be to get all the facts and suggestions he can from other people's thinking and experience.

In Europe a method of preserving grapes is now very generally followed. The cluster is cut with a piece of the cane still attached, and the lower end of the cane is inserted in the neck of a bottle containing water. Grapes thus treated are kept in a perfect manner for a long time. The European journals have figured racks and other devices for holding the bottles in such a manner that they sustain the weight of the fruit and also to allow the clusters to hang free, and as much as they would upon the vine. We are not aware that this method has been tried with our native grapes. These, even at the holidays, when the price is highest, sell for too little to make this method of keeping profitable, but for home use the experiment seems to be worth trying.

JOHN SNELL'S SONS, Edmonton, Ont., report a steady demand for good Cotswold sheep at good prices, as the following list of recent sales shows: To C. A. Buttrick, Liberty Falls, N.Y., one shearing ram, \$60; to C. S. Perry, Kinsale, Va., one shearing ram, \$55; to P. Lanyon, Belmont, Wis., one ram lamb and one ewe lamb, \$90; to J. D. Telford, Racoon, Ill., eight rams and eight ewes, \$455; to W. J. Paterson, Owen Sound, Ont., one ram lamb, \$45; to W. A. Dinwiddie, Aurora, W. Va., one shearing ram, \$75; to C. Knaggs, Oriel, Ont., one ram lamb, \$75, and one ram lamb, \$40; to J. H. Ransom, Jacksonville, Ill., one ram lamb, \$100, and one ewe lamb, \$40; to James Groves, Lynville, Ill., one ram lamb and one ewe lamb, \$100; to Col. Loyd, Tunis Mills, Md., one ram lamb, \$50; to T. W. Samuels & Sons, Deatsville, Ky., five ewes, \$275.

The grazing of land by a mixed stock of cattle, sheep and horses, results in the land being more evenly grazed than where one kind only is kept. Where, however, many sheep are grazed with cattle, as they pick out all the finest of the grasses and clovers with their narrow noses, the cattle will not thrive so well. But sheep, on the other hand, eat with avidity and impunity much which cattle dislike and avoid. Many pastures grazed only with cattle are in springtime quite yellow with buttercups, which a few sheep mixed in with the cattle would keep down. Horses, when kept in a pasture by themselves, are very uneven grazers. A few, kept in a large cattle pasture, will graze the rank places where cattle have previously left their manure, and also about gate places where the land has been trampled. Both horses and sheep will thrive much better when they are able to select their own food.

FARM AND FIELD.

[For *The Rural Canadian*.]

KNOWLEDGE IN FARMING.

Experience in farming is the only true teacher. By long years of experience, the adaptation of soils to different crops has been discovered. There are, however, many truths in connection with farming yet to be drawn out and proved. This can only be done by intelligent, watchful, educated farmers. A man may be educated ever so highly, may have a vast amount of knowledge in every branch of learning, and may be a first-class chemist, but if he has not had the training and experience he cannot make his knowledge of any practical use on a farm. His well-trained mind may, however, make him far more successful than if he were entirely illiterate. Place an ignorant cockney from the centre of London, England, on a farm for himself, and what would be the result? Bring a graduate, who has never been on a farm, from a university, and place him in the same position; in nine cases out of ten he would make himself successful. The first would have no idea whatever of his position, and would be completely lost. The second, whose mind had been trained, and had learned all he knew by close application, would at once apply himself to study and observation, and would add only another branch to his attainments. The first, having an untrained mind, cannot understand what he reads or even what he sees, therefore cannot be successfully shown. The second, having gained his knowledge by reading and being taught, can understand what he reads and what is shown him, because the training of his mind has been such that no point can escape his comprehension. While the first can only understand that he is to plough, sow and reap; the second understands there are many details which must not be omitted—and here lies the true reason of success.

But the educated man brought up on a farm has the advantage of both, he has the advantage of a thorough training, though that training may be in a great number of cases only mechanical; still by it no thought is needed for the mechanical part of the work, and the whole attention may be thrown into the scientific part. Then if he have an intelligent, thinking mind, his experience is apt to show him at once how to make his success sure.

All our forefathers had to do on the virgin soil was to sow and reap; but the time has come when a great deal of thought and study must guide our efforts in successful farming. The condition of the soil most favourable to particular crops, the methods of arriving at this condition, and the proper rotation to carry on, are only a few of the many points to be studied. To study these few successfully requires a mind trained to think deeply, and this training can only be got in a thorough education.

Another advantage the educated farmer has over the uneducated, is his aptitude for reading. We would hear less of the many swindling transactions that are of daily occurrence, if farmers read more. Nearly every case of swindling we hear of has a farmer for its victim. We as farmers should consider this a disgrace. This evil can only be overcome by a knowledge of the world's ways and the world's business. The only way a farmer can obtain this knowledge is through the newspapers, and only through them by intelligent reading.

It is plain, therefore, that to be successful, progressive farmers, we must cultivate our brains as well as our soils, and we must not make the mistake of calling our education finished when we leave school. Life is not long enough to learn all; we must learn to put our education to

use, and to make it useful we must add to it. The best way to add to our stock of knowledge in farming is by getting all we can from brother farmers, and our easiest way to get that is through the agricultural papers. E. W.

Whitevale, Ontario.

DEEP PLOUGHING AND GRASS SEEDING.

The Farmers' Club at Elmira, N.Y., is chiefly composed of practical farmers, and at its meetings some useful facts are always elicited. The latest copy received of *The Husbandman* details a conversation held just before the late meeting of the Club was called to order, between a knot of members in which the subject of deep ploughing and grass seeding was the theme. It is worth reproducing. The question was asked, What is the effect of deep ploughing upon subsequent grass seeding? One man said:

"There is a field"—the speaker indicating direction by a wave of the hand—"ploughed a dozen years ago more than a foot deep late in autumn, and the next year fitted for wheat, on which was the grass seeding. To-day the sod is like a cushion under the feet, and it has been so ever since the second year after that deep ploughing. Why, that is the way to make grass on heavy land. You must get down so that the roots have earth to get hold of or you can't make a sod. That field never had half a crop of grass until the soil was opened by the plough. The treatment wouldn't do so well in loose soils—these gravelly flats for instance—but such soils never get first-class sod with any treatment."

The reply came from a farmer who values grass beyond all other crops, because he regards it as the foundation of successful farming. He said:

"That is good doctrine when applied to heavy soils like most of the uplands skirting this valley. I have just been showing a field that I treated that way, so far as deep ploughing is concerned, to a party of visitors who doubted the effect. If I am not mistaken they saw the finest grass they had looked on this year—thick, compact sod, grass up full height, fresh and rugged, set to stay. That land was ploughed, part of it a foot deep, late in the fall, harrowed in spring, and grass seed sown without a grain crop. Another part was left till spring because I couldn't get all the work done before, and was then ploughed not so deep—say seven inches. On that, grass is fair, but not so rank nor so well set as on the other. I want to plough seventy-five acres more of that heavy land as deep as possible, and as late as I can before the ground closes for winter. I have seen enough to satisfy me that the way to establish grass on close, heavy land is to loosen the land first by the plough—my process; then by frost—nature's process."

The First Speaker: "Of course you won't get a full crop every year. I got a light yield this year, but all old meadows are light. Still mine was thick at the bottom, and the crop, although not heavy, will wear well."

A Third Farmer: "I don't know that it is good policy to seed with grass alone; it seems to me there is loss of the use of land."

The Second Speaker: "So there is, if a grain crop is the principal object; but if you want grass, that is the way to get it. You need have no fear if the ground looks rather naked in May, and the crop small in June. Up to July there will not be much pasture, but it will do no hurt to turn the cattle on and along in July they will find more fresh feed than on any other field. Some farmers say, keep cattle off; my way is to put them on at any time, for they will find a little very juicy grass to graze, and they won't hurt the seeding a bit; in fact they will do it good, for their feet

will plant some of it better, and grazing will thicken the whole by making root-growth."

First Speaker: "Talking of seeding, we hear a great deal of complaint from farmers who have heavy soils, that they can't depend on getting good catches. The whole trouble is in the lack of fitting. If they will break up their lands so that grass roots have a place to run, they won't fail so often. When they do that they can get better crops, and more surely, both of grass and grain, than farmers on these gravelly flats get, and make more profit, too, although they may have more hard work, for heavy lands cannot be tilled so easily."

Second Speaker: "All very true. The first thing we do is to fit land for the crops wanted. When we talk about thin seeding, for instance, with wheat, there are protests coming from every direction, but we provide a condition that doesn't seem to be understood by men who don't want to be convinced that three pecks of wheat will seed an acre if the soil is in the best condition for wheat. I don't advocate thin seeding as the general rule, because I know that not one field in ten is well fitted. Get that condition and anything beyond three pecks is thrown away."

Third Speaker: "You want to fit the land so that every kernel will grow, I suppose."

Second Speaker: "Precisely; then I don't have to throw seed away. But if some of it is to be covered by great flat stones, some by heavy clods, and some must fall on land that is too thin to support the plants, even if they make a start, then I must sow more. I want it understood that when I recommend thin seeding it comes after thorough fitting. Get that fact well in mind—attend to the fitting—and there is no earthly use of distributing seed that won't have room to grow. But it's of no use to talk about it, for nine farmers out of ten think they know better. They will go on sowing two bushels of wheat, or three of oats, because they can't persuade themselves that any less may bring a full crop. I have seen wheat this year as thick as I want to see it, and only three pecks of seed were used on an acre. But, mind you, the land was in good order."

"THAT SWAMP."

Farmer Brown had a pretty good farm, but there were places on it which needed something more than the annual spread of manure to make them as productive as the rest of it was. These places were, for the most part, on the tops of the hills. The action of the wind and rain seemed to blow and leach the fertility out of these spots.

In one corner of the farm was a swamp, or marsh rather, covering about five acres. This was overgrown with a tall, rank grass every year, which was never out, because of its utter unfitness for use with stock. So, summer after summer, the grass had grown up, and winter after winter it had decayed, and the "swamp" was considered an altogether worthless piece of property.

One day Farmer Brown had a visitor from town. He was a man with a scientific turn of mind. He was not, however, a practical farmer, and Brown took but little stock in his ideas, when he advised doing this or that about the farm.

"He plans well," Mr. Brown said to his son. "That is, his plans sound well enough, but he hasn't put 'em into practice, so he don't know just what he's talkin' about, all the time, to my thinkin'. They may work all right, and then ag'in, they may not."

This visitor looked at the hill-tops where the wheat had a thin, yellow appearance. The oats looked no better in these places than the wheat did.

Then he looked at the swamp. He got a pole

and dug down among the roots of the grass growing there.

"Have you ever drawn out any of this soil?" he asked Farmer Brown, as he threw up some of the black deposit.

"No, we never did anything with it," answered Farmer Brown.

"Why?" asked his visitor.

"Oh, I dunno," answered Brown, "unless it was because we didn't s'pose it was worth while."

"I want to tell you one thing," said the other. "In this marsh you have got a bed of manure that will last you for years, and is almost as valuable as superphosphates, or guano. You try it, and see if it doesn't make the tops of those hills produce a different looking crop next year. Why, Brown, this marsh is worth a small fortune to you, if you see fit to use it. It's a regular gold mine, but you've got to dig your gold."

At first Farmer Brown didn't seem inclined to take much stock in his friend's advice. But his son thought it over, and saw sense in it, and the result was that next spring, before they ploughed, they drew out a good many waggon-loads of the muck and spread it over the hills, by way of experiment. When the wheat and oats came up there, they were greener than in any other place. They kept this greenness all summer. They grew tall and strong, and bore an excellent crop. Just what the soil had seemed to lack the muck from the marsh seemed to supply. That fall they kept a man busy for weeks hauling it. The supply seemed inexhaustible. It had been accumulating for years. Nature had been storing it up for such a time of need. That was five years ago. Farmer Brown has built up his farm into one of great productiveness from this long-neglected marsh. He has a supply for years to come. He wonders now that he never thought of using "the swamp dirt" before, when he looks upon his reclaimed hills whose lack of fertility used to occasion him so much annoyance and loss of crop.

THE PEA AS A RENOVATOR.

Mr. W. K. Gibbs, of Davie, Georgia, reports to a contemporary some experiments with peas and wheat extending over several years, which illustrate this: The soil was a dark, gravelly one, with a yellow clay subsoil, and was much worn. In 1870, '71 and '72 the land had been cultivated in tobacco, corn and oats, successively. In October, 1873, Mr. Gibbs sowed the land in wheat. In June, 1874, he harvested nine and one-half bushels of wheat to the acre. As soon as the wheat was out he sowed Whippoorwill peas and ploughed them under; having picked enough peas to pay for the seed peas, seed wheat and ploughing. In 1875 Mr. Gibbs harvested fourteen bushels of wheat. The season was better than the average, however. The same pea was sown and ploughed under again. The vines were so large this time that a harrow had to be run ahead of the plough in the same direction. Twenty bushels of peas per acre were gathered this year, which were sold for one dollar per bushel the next summer. In June, 1876, seventeen and one-half bushels of wheat per acre were harvested, the season being an average one. Peas sown and turned under as usual. In 1877, twenty-three bushels of wheat per acre were harvested. The season an average one. In the spring of 1877 clover seed was sown on the wheat and harrowed in with a light harrow. In 1878 the land was pastured until late summer. In the fall, the stand of clover not being sufficient to leave over, it was turned under and the land put in wheat. No manure was used all this time, except once a little stable manure on a plot that was much poorer than the rest. The increase seemed to be in the weight and length of the heads, and not

in the straw. Mr. Gibbs seemingly prefers Whippoorwill pea, because it is earlier and matures more peas and vines before the time of ploughing, and because the vines grow in a way to be more easily turned under. If sown in rows and cultivated, the peas are just so much the better.—*American Farmer, Baltimore.*

PUTTING AWAY TOOLS.

The wearing out of farm implements is, as a rule, due more to neglect than to use. If tools can be well taken care of, it will pay to buy those made of the best steel, and finished in the best manner; but in common hands, and with common care, such are of little advantage. Iron and steel parts should be cleaned with dry sand and a cob, or scraped with a piece of soft iron, washed and oiled if necessary, and in a day or two cleaned off with the corn-cob and dry sand. Finally paint the iron part white resin and beeswax, in the proportion of four of resin and one of wax, melted together and applied hot. This is good for the iron or steel parts of every sort of tool. Wood work should be painted with good boiled linseed oil, white lead and turpentine, coloured of any desired tint; red is probably the best colour. Keep the cattle away until the paint is dry and hard, or they will lick, with death as the result. If it is not desired to use paint on hand tools, the boiled oil with turpentine and "liquid drier," does just as well. Many prefer to saturate the wood-work of farm implements with crude petroleum. This can be used with colour, but is applied by itself so long as any is absorbed by the pores of the wood.

FARMERS' HOMES.

"There's no place like home." Much has been said and written upon what should be done to make a model home for the farmer. Made up as this great country is largely of farmers and farms, its pride should be in the attractiveness of farmers' homes. We do not speak now of the interior, but of the exterior, of the home. The results which may be attained if a united effort should be made by the farmers of the country to improve their homes by cultivation of trees, shrubs, and flowers, would be marvellous, indeed. Often, very often, a farm house is remembered by the passer-by, chiefly for its unattractiveness, owing to an entire absence of all ornamentation—not a flower, shrub, or tree, to be seen, and, perhaps, not even a fence enclosing the rusty grass plot. No place is so retired that the ornamental and the beautiful can be dispensed with. The surroundings of home have much to do with the respect which the children have for it; and long years after, its appearance will go toward making up the pleasant or unpleasant memories connecting themselves with it. The farmer cannot afford to neglect beautifying his home. It will add greatly to the contentment of the children, and awaken a just pride in the hearts of the wife and of the farmer himself, to surround his home with those attractions which nature is ready to contribute. Let every farmer whose home may as yet be wanting in this respect, give the matter his careful thought.

There are a great many farms and fields which can never be cultivated at a profit. These if planted with forest trees, such as chestnut, oaks of different varieties, pines and larches, would produce a growth of timber which would be a source of profit, and then the energies of the farmer might be concentrated upon his best land, and his manure could be applied where it would do the most good.

CHARITY is a first mortgage on every human being's possessions.—*Uncle Esch's Wisdom.*

CREAM.

A DOUGHMISTIC difficulty—heavy broad.

A BEAR story is not necessarily the naked truth.

HAS it ever occurred to base-ball men that a milk pitcher is generally a good fly catcher?

WE cannot expect perfection in anyone; but we may demand consistency of everyone.—*Hannah More.*

HE who loves to read, and knows how to reflect, has laid by a perpetual feast for his old age.—*Uncle Esch's Wisdom.*

IT isn't because a woman is exactly afraid of a cow that she runs away and screams. Is it because gored dresses are not fashionable.

THERE is a girl in Plymouth county who has had eighteen different lovers, and not one of them ever got his arm around her. She weighs 384 pounds.—*Boston Post.*

HYBERNIAN (after attentively surveying tourist's bicycle)—"Arrah, now an' sure now that little wheel will niver kape up with the big wan, at all, at all!"—*London Fun.*

"You are as full of air as a music box," is what a young man said to a girl who refused to let him see her home. "That may be," was the reply, "but I don't go with a crank."

"Do not marry a widower," said the old lady. "A ready made family is like a plate of cold potatoes." "Oh, I'll soon warm them over," replied the damsel, and she did.

OUR little Caddie, four years old, was accused by her mother of having lost her memory, and the child looked bewildered for a moment and then light seemed to dawn upon her for she exclaimed: "I dess I know what memory is. It's the thing I fordet wiv."

"LAY off your overcoat, or you wont feel it when you go out," said the landlord of a Western inn to a guest who was sitting by the fire. "That's what I'm afraid of," returned the man. "The last time I was here I laid off my overcoat: I didn't feel it when I went out, and I haven't felt it since."

LADY visitor: "Your boy looks very bad, Mrs. Jones; what's the matter?" Mrs. Jones: "Yes, ma'am, he be very bad; and what's more, the doctors has made him worse. I'm sure we poor people need to pray with all our hearts, 'From all false doctrine, good Lord deliver us.' I never saw its meaning afore."

"Don't you think Jerseys are too lovely for any use?" she sweetly inquired, referring to the garment so popular now. And he answered dreamily, as he clasped her soft hand in his: "Yes, their milk makes the best smearkase I ever e't in my life. You're liable to get yeller janders of you e't too much of it, though."

A PIOUS lawyer, who supposed himself to be very sarcastic, said to the keeper of an apple stand: "It seems to me that you should quit this trying business and go at something which is not so wearing on the brain." "Oh, 'taint business," said the apple seller, "it is lyin' awake nights tryin' to decide whether to leave my fortun' to a orphan 'sylum or to a home for played-out old lawyers as is a-killin' me."

"No, SIR-EE," remarked the old resident; "my wife didn't bring me a cent. But it's all my fault. I wouldn't have it. The morning of the day we were married, I says to her, says I: 'Maria, how much money have ye got?' Says she: 'John, I've got just 25 cents.' 'Then,' says I, 'come with me,' and I took her down to the canal and had her throw that quarter into the drink. I wasn't going to have no woman twitting me about spreading 'round on her money."—*Lovell Citizen.*

GARDEN AND ORCHARD.

INSECTS INJURIOUS TO THE PLUM.

(Continued.)

The Polyphemus caterpillar (*Telea Polyphemus*),—See Figs. 50, 51 and 52—is described as “one of our handsomest insects” and also the progeny of one of the Emperor moths.

“The larva,” says Mr. Saunders, “is about as thick as a man’s thumb, of a greenish-yellow colour, and with the segments of the body very deeply cut into. These segments are covered with tubercles, which have clusters of small spines proceeding from them. Its history is very similar to that of the Sphinx which I have just mentioned. Instead, however, of forming a chrysalis under ground it spins a cocoon inside of two or three leaves of the tree on which it is feeding, which it draws together, and within this enclosure changes to the pupa state. This cocoon, being attached to the foliage, falls to the ground with the leaves in the autumn, remaining there until the following summer, when, in the early days of June, the large handsome moth is produced.”

Glancing a moment at the minute Eye-spotted Bud-moth (*Grapholitha oculana*),—See Figure 53—a tiny creature found in the pear and occasionally in the apple, as well as the plum, and the Oblique-banded Leaf Roller (*Loxotania rosaceana*),—See Figs. 54 and 55—also somewhat promiscuous in its dietary, the next pest in order is the too-familiar Curculio (*Conotrachelus nenuphar*). See Fig. 56.) In this, as in some other cases—where it is necessary, to ensure distinctness, to magnify the illustration—the faint black lines represent the natural size of the insect. The Curculio is of the same family as, and not very unlike, the peabug. It is small in size, and of a rough gray or blackish colour, and when resting looks very much like a dried bud of the tree.

Its life history and habits, and the readiest and most efficacious known means for its destruction, are thus referred to by Mr. Saunders. He says:

“It usually passes the winter in the ground, in the chrysalis state, though the perfect insect sometimes escapes from the chrysalis, during the later autumn months, and then may be found under the bark hibernating in the winter. As soon as the trees are in blossom the curculios may be found in abundance upon them, waiting for the first signs of development in the young fruit. Before the blossoms have fairly left the tree, the tender fruit is detected by this watchful pest, which at once begins to deposit eggs in it. These shortly hatch into small grubs, which penetrate

into the fruit, causing decay and premature falling. The jarring ought to be begun early in the year, while the trees are in blossom, and in this way a large proportion of the curculios may be collected before they have done any mischief; in fact, too much stress cannot be laid upon the recommendation to begin the jarring process quite early in the season.

“I have found them to be quite common on the trees at night, and by enclosing specimens in boxes covered with black cloth, so that no light

curculios may take refuge only to be captured; paving the ground around the trees, so that the curculios, when they fall with the fruit, may have no hiding place, and be forced to wander about until destroyed; burning coal tar under the trees; gathering up the fallen fruit and destroying it with its occupant; enticing the curculios into bottles filled with some sweet liquid, and placing elder branches in the trees, may all have some value, but systematic jarring is the simplest and by far the most effectual remedy.

In Essex, however, Mr. Dougall and others claim to have effectually protected their plum-orchards from the curculio by keeping chickens.—Report of the Ontario Agricultural Commission.

A NEW SCHEME.

It is a well known fact to all fruit-growers, that certain varieties of apples, pears and plum trees produce very heavy crops on alternate years, but very light crops on the succeeding ones. In fact, some kinds of fruit trees cannot be relied upon to produce any crops on certain years. The odd years are the fruitful ones for some kinds of trees, and the even years for others. Mr. Douglas, of Waukegan, has recently called attention to the fact that nut-producing trees bear bountifully some years, and very sparingly, if at all, the succeeding seasons, although there are years peculiarly favourable or unfavourable to the production of fruit. Trees that produce very large crops one year, appear to suffer a drain on their vitality, so that one season is required in which to recuperate. It often happens that nearly all the trees in an orchard are of a few varieties that bear the same year. The owner had an abundance of fruit that season, but little or none the next. Various attempts have been made to change the so-called “bearing years” of fruit trees, so as to produce heavy crops in those seasons when there is generally a failure. David Flanders, of Sing Sing, N. Y., thinks he has discovered a process for

THE POLYPHEMUS CATERPILLAR—*Telea polyphemus*.

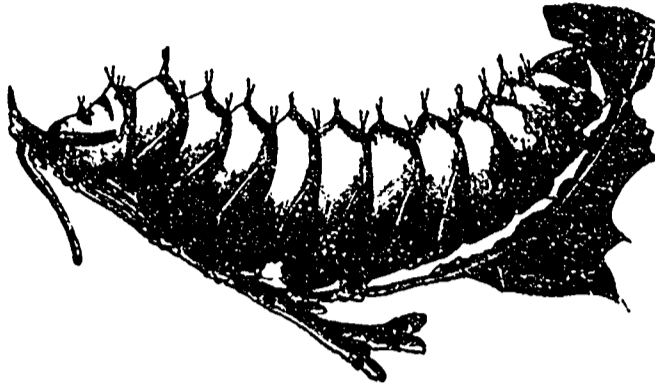


Fig. 50.

POLYPHEMUS MOTH.



Fig. 51

COCOON OF POLYPHEMUS MOTH.



Fig. 52.

EYE-SPOTTED BUD MOTH—*Grapholitha oculana*.



Fig. 53—Larva and perfect insect.

THE CURCULIO—*Conotrachelus nenuphar*.

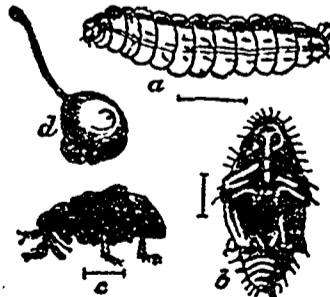


Fig. 56.

OBLIQUE-BANDED LEAF ROLLER, LARVA, AND MOTH—*Loxotania rosaceana*.



Fig. 55.

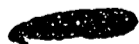


Fig. 54.

could get in, have found them to deposit eggs notwithstanding the darkness. They are active during the day, and seem to be almost as active at night. Their periods of inactivity, if they have any, seem to be about the cool of the morning or early in the evening. I do not know whether they keep hard at work during the entire season, but presume that, if the weather were cold, they would remain torpid during a portion of the day or night. I consider the jarring method quite sufficient as a remedy to keep the insect in check, when faithfully followed.”

Placing under the trees chips in which the

securing this result, and like most persons who have a new idea on a practical subject, has obtained a patent on it. This process consists in applying to the blossoms of the trees, in the spring of the bearing years, by sprinkling or otherwise, an acid or alkaline solution of sufficient strength to arrest the development of the blossoms or destroy their vitality, and to cause them to gradually fall off. The solution, of whatever kind, is so dilute that it will not injure the foliage or branches of the trees that are so treated.

THE DAIRY.

TROUBLESOME MILKERS.

Cows are often troublesome on being milked, and the kicks and knocks which they receive for this restlessness only render them the more fretful. If they cannot be overcome by kindness, thumps and cuts will never make them better. But the fact is, restless habits were engendered in them by the treatment they received when first put into the stable, when, most probably, they were dragooned into submission. Udders and teats are very tender immediately after calving, and especially after the first calving; and when unfeeling, horny hands tug the teats in stripping, as if they had been accustomed to the operation for years, no wonder that the young and inexperienced cow should wince under the infliction, and attempt to get rid of her tormentors by kicking. Can the "critter" be otherwise than uneasy? and how can she escape the pain but by kicking out a heel? Straps or strings are then placed on the hind legs to keep the heels down, and the same is perhaps done to her tail. Add to this the many trials and scolds uttered by the milker, and a faint idea of how a young heifer is broke into milking may be conceived.

Some cows are naturally unaccommodating and provoking; but nevertheless nothing but gentleness toward them will ever render them less so. Some cows are only troublesome to milk for a few times after calving, and soon become quiet; others kick pertinaciously at the first milking. In the last case, the surest plan is for the milker, while standing on his feet, to place his head against the flank of the cow, stretch his hands forward, get hold of the teats the best way he can, and let the milk fall to the ground; and in this position it is out of the power of the cow to hurt him. Such ebullitions of feeling, at the first milking after calving, arise either from feeling pain in a tender state of the teat—often from an inflammatory state of the lining membrane of the milk chamber, or simply from titillation of the skin of the udder and teat, which becomes the more sensitive as the heat increases; or, the udder being still hard, gives pain when first touched; and should the udder be difficult to soften, the calf should be allowed to suck at least three times a day, until the udder becomes soft. This will doubtless cure the udder, but may cause another species of restlessness in the cow when the calf is taken from her, therefore it is preferable to let the milker suffer some inconvenience than run the chance of the udder of the cow being injured.

Be the cause of irritation what it may, one thing is certain, that gentle and persevering discipline will overcome the most turbulent temper in a cow. Milking affords different degrees of pleasure to different cows. One yields her milk with a copious flow, with the gentlest handling; another requires great exertions to draw in streams not larger than a thread. The udder of the gentle one has a soft skin, and short teats like velvet; while that of the hardened one has a thick skin, and teats long and tough, like tanned leather.—*Prairie Farmer.*

SHELDON ON MILK.

The modern development of the milk trade is a thing that would have astonished our forefathers, if it had been told to them. What the farmers would have done during the recent years of depression, if they had all been compelled to make their milk into cheese and butter, if, that is, there had been no milk trade as we see it today, it is difficult to imagine. Even as things were, with a large and an increasing proportion

of the milk produced in Britain consumed as milk, the price to which cheese sank two years ago was lower than had probably been seen during the present century. Things are now better, and a healthier tone prevails among dairy farmers. Cows are milking much better this year, and the price of cheese, if only a fair quantity of it is made, will enable farmers to pay their way. Milk sold at 6 cents a quart is more profitable to the farmer who can realize that price than any possible cheese-making or butter-making can be. Milk at 4 cents a quart, in fact, is equal to \$21 or \$22 a cwt. for cheese, and to 80 cents or 86 cents a pound for butter, so that 8 cents a quart, the price milk is generally retailed at, would enable farmers to save plenty of money. It may be said, indeed, that farmers, as a rule, can pay their way if they receive 4 cents a quart for their milk, without the cost of retailing it, and this for both summer and winter's milk. For the summer's milk only, which is so much less costly to produce, farmers in many cases could carry along at 13 cents to 14 cents a gallon for the milk, providing the rents they have to pay are moderate, and their land is well adapted to milk-producing.—*Agricultural Gazette.*

THE CARE OF COWS

The dairy requires, in fact, scrupulous care in every department. It is a delicate industry. And the care must begin with the cow. It is not enough to have a good cow and to feed and water her properly: she must in fact be made a pet of. That description of her treatment is the very best that can be made. In handling her it should be done as if she were a frail, delicate thing, liable to injury from the slightest rough touch or unkind word. Remembering her excessive nervousness, she ought never to be frightened, indeed not any more than a considerate person would frighten a child, which a considerate person would never do. Nothing is capable of vexing us more than to see a dog playfully tormenting a cow. The reader has often seen it. The dog enjoys the sport, but the cow does not, and if it were our dog and there was no other way to stop the annoyance, we would make a target of him. The manner in which cows are treated in going to and from the pasture, and often in milking, is nothing short of brutality. They are hurried, screamed at, swore at, and sometimes clubbed, while the officious dog is on hand to add his voice to the distracting medley. The system of the animal is all shaken up, the nerves all unstrung, and reason must dictate that the milk must suffer injury. The cow that is treated as if she were a valuable friend that has nothing to fear, and that knows she has a friend in one who has the care of her, will do the very best she can, and actually appear to try to do it. Animals may not know as much as we sometimes give them the credit of knowing, and their apparent extra effort to repay kindness may be in no way the part of intelligence, but they do appear sometimes to exert themselves as a special recognition of kindness. Perhaps this often may be true of the horse, but the cow appreciates kindness as much as any other animal, and in the midst of the quiet that results from kind treatment she does much better than she otherwise would, whether she tries or not.

BUTTER COWS.

The agricultural papers have had much to say about large yields of butter, chiefly from cows of Jersey blood, indicating the strong interest which the subject of improved stock of this kind has obtained upon the agricultural community. In breeding for useful qualities, the claim that

"blood tells" in cows as well as in all other branches of breeding, has recently received a forcible demonstration in the case of the young cow Bomba, 10,830, that last summer accomplished a two months' (sixty-two days) test in which she gave for the first month eighty-nine pounds fourteen ounces, and for the second eighty-four pounds five ounces of thoroughly-worked butter, weighed before salting. She is less than four years old, has had two calves, and after being four months in milk is reported to be still making two and a half pounds of butter a day. As the yield exceeds any heretofore reported of so young a cow, her owner, Mr. A. B. Darling (says the *Herald*) has addressed a request to the Directors of the American Jersey Cattle Club for the appointment of a disinterested committee to inspect a special test of the cow. She is the result of a peculiarly strong combination of the blood of other great butter cows. Beginning back four generations with Colonel Hoe's Alpha, whose incomplete tests indicated over twenty pounds a week, her pedigree takes in Eurotas, that made over fifteen pounds a week; Eurotas, that made 778 pounds in a year; imported Violet, whose partial tests were equivalent to nearly twenty pounds a week; and also derives the English Rieter blood, which was the crowning success of forty years' careful breeding from tested cows by Mr. Philip Dauncey, of Horwood, England, whose dairy for years supplied the Queen's table, and whose stock, descended from his bull Rieter, has brought by far the highest auction prices reached in England long before Eurotas and other great butter cows had demonstrated its value in this country. By such methods of breeding for a direct purpose as Bomba illustrates, American breeders expect to gradually establish a fixed quality, confirmed by generations of special merit, that will transmit useful results, and raise Jersey from her average standing as a merely ornamental cow to one of unsurpassed value in her specialty.

THE PROFIT OF COWS.

The Darlington (Wis.) *Republican* publishes the following statement, made by the proprietor of a creamery of that place: "The total income of twenty-eight patrons was 55,936 from 211 average cows, equal to \$26.80 per month for the average time, five months and twelve days. All farmers know that with proper handling a cow will give a flow of milk eight months in the year, and many contend that a heifer started right will flow eleven months at five years old. Call the season eight months, and we have as the butter product \$38.96. Every calf dropped is worth \$5, the skim milk is worth at least \$3. Here we have the average cow producing nearly \$47 a year. Is it any wonder the dairy farmers in New York, Pennsylvania, and Northern Ohio live in fine houses and have big barns? What our farmers want to do is to get rid of their poor cows, quit sowing flax and wheat, seed down, club together and buy a few Jersey bulls, and in five years Lafayette county will show cows good enough to sell for \$100.

The length of time that a cow goes dry has quite as much to do with her value as a milker as her butter product per week. Going dry for a long period is a matter of habit, and if a young heifer is not milked until pretty nearly her time for calving, her value as a cow will be greatly lessened thereafter. After drying up once for three or four months before calving, it is very difficult to get a cow to give a paying amount of milk later than this date at a subsequent time.

HORSES AND CATTLE.

POLLED ANGUS AND HEREFORD HERDS.

The Lindsay Post, of a recent date, had a lengthy article descriptive of Mr. Mossom Boyd's Stock Farm, near Bobcaygeon. After making reference to Mr. Boyd's enterprise as a lumberman, the extent of his operations, his saw-mills, and the stabling for horses, our contemporary conveys his readers to

AN ISLAND PASTURE GROUND.

Across from the mills in Pigeon Lake is Big Island. Years ago, when the lumber interest was at its maximum, there was to be found on the island some fine pine. In process of clearing off the timber many roadways were cut through and across the island. These speedily were covered with an extraordinary growth of grass, making a splendid pasture for the horses coming out of the woods after a hard winter's work. Turned loose on the island for five months the stock grew fat and glossy with good living. From horses to cattle stock is an easy transition, and a few head were turned loose upon the island. The experiment was a signal success, and to-day the island is the principal grazing ground for Mr. Boyd's stock farm. There are twelve hundred acres of land on the island, four hundred acres of which are fenced in and a good part of it cleared. Realizing the advantages of the locality for breeding purposes on account of its isolation and splendid pasturage, Mr. Boyd two years ago set about procuring some of the best breeds of cattle. Reliable and competent breeders in the old country were applied to and many head of the best and most popular breeds of cattle were purchased by Mr. Boyd and brought to Bobcaygeon. A number of very fine Aberdeen or Polled Angus cattle selected by Mr. Geo. Wilken, of Scotland, by instructions from Hon. J. H. Pope, Minister of Agriculture, were despatched to Bobcaygeon on their arrival in Canada. Several fine head were purchased from Mr. Hunter, an importer of thoroughbred cattle, while the animals were in quarantine at Quebec, during the summer of 1881. From Mr. F. W. Stone, of Guelph, eighteen head of pure bred Herefords were bought. These were transferred to the island, where the precautions to preserve the purity of each breed are very strict. The bulls of each class are kept confined, while the cows run at large. Bull calves are taken from the island to the mainland at an early age. There are now on the island forty head exclusive of the

POLLED ANGUS CATTLE.

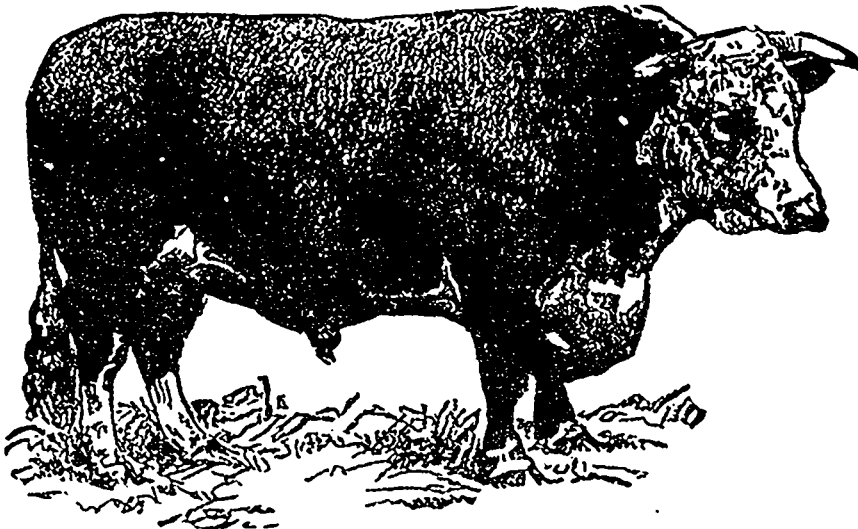
These are Mr. Boyd's last importation, and with the exception of those at Port Perry, owned by Messrs. Adams, and at the School of Agriculture, Guelph, the only ones in the province. In Point of value they rank very high. Hon. Mr. Cochrane recently sold two heifers of this breed at \$1000 each. Several of Mr. Boyd's cattle are worth about that figure, while a number cost as high as \$750 each. As our readers are no doubt aware, the Polled Angus are completely black, and as the name indicates are without horns. [This breed was described, with engraving, in the RURAL CANADIAN of the 19th January, 1882.] They are not quite so large in frame as the Shorthorns, but mature early, and being of small bone and symmetrical in appearance, they reach at two years a size and weight that render them a most desir-

able breed for beef. Many cattle breeders in fact prefer the Polled Angus, and predict that it will be the most popular fattening breed among farmers. In milk-giving qualities the breed is also very good.

A number of bulls picked from each herd are kept for service at the farm. The neighbouring farmers have made a fair use of this opportunity to raise the quality of the stock in the neighbourhood.

THE STOCK FARM

is located east of the village about one mile. Four hundred acres are under cultivation or in fallow. The land is of an exceptionally good quality. During past years an impression seems to have been formed that the land in the vicinity of Bobcaygeon is upon the average of a rocky character. This is highly erroneous, and the farm of Mr. Boyd while good is only the counterpart of many others in the township. Improvements of a large and substantial character are in contemplation. During this autumn large stables will be built to shelter the stock on the island when it is no longer tenable during the winter. These stables will be after the most approved system, conducive to the comfort of the animals and to economy of labour in attendance. In the stables at present standing on the farm are housed



PRIZE HEREFORD BULL.

the bulls for service. A fine Durham bull, three years old, is a superior animal of its class. Two Herefords of pure breed, and a Polled Angus bull of two years were almost faultless. The Herefords, with their white faces and white legs, seemed odd to those not accustomed to that style, but a herd of them all close alike as so many peas looked very pretty. They are smaller than the Durhams, and are popular with cattle-breeders.

HEREFORD CATTLE.

In this country the Herefords have many warm admirers; and among the largest breeders of this class of cattle Mr. F. W. Stone, of Guelph, stands foremost. His opinion is that Herefords have not been used in Canada to the extent that they ought to be. As to their hardiness, early maturing qualities and weight, on the same food at a given age, he considers the Herefords equal to the Durhams. As to their milking qualities, he alleges their milk is richer than the Durhams', and as plentiful in a given period, if not at one time. In his evidence before the Ontario Agricultural Commission, he goes on to speak of their being the best grazers of any existing breeds, and says:—

"If I had a three-year-old Durham grade, and a three-year-old Hereford grade in the spring, and they both weighed 1,500 pounds, and if I put them out at pasture on the 1st of May, I think the Hereford grade would come out on the 1st of October in better condition than the Durham.

The Hereford would give more prime beef and less offal. When they went to the shambles the Hereford would give better cuts."

No one can pretend to say that the Herefords are not, in such a country as Canada, a most valuable breed. If it should be found, as it may be that, not in Muskoka alone, but in large tracts of country lying still farther to the northward, there are lands suited for grazing in the summer months but not available for other purposes of agriculture, the value of the Hereford will become even more apparent.

CARROTS AS FOOD FOR HORSES.

A correspondent of long experience calls our attention to the following extract from the *London Live Stock Journal*, adding that he has himself fed carrots to cart and other horses for thirty years with good results, as hundreds of others have also done throughout the Eastern States, and that he has never heard of any injury from their use:

"We do not entirely agree with those who maintain that the carrot is the most wholesome and nourishing food which can be given to horses. The carrot, says *L'Aviculture*, is excellent when employed as a tonic for old horses, in order to purify and strengthen the blood; but its use is

dangerous for young horses, and especially for stallions. It gives them too much blood; makes them nervous, irritable, spiteful, or vicious when at work, and predisposes them to apoplectic fits if they do not take enough exercise. Geldings and mares might not be particularly liable to inconveniences of this nature; nevertheless, in all cases carrots should be given with the greatest moderation to horses of less than ten years of age. For horses past this age they may be harmless; and with oats, may constitute a valuable article of food. Horses eat them with avidity, especially when they are mixed with coarse bran. This diet gives horses new blood, which seems to restore their youth.

"Unfortunately, the carrot is not to be had all the year round. We need not regret this, however. An article of food, the effect of which is so powerful, is only valuable when employed for a time. Its prolonged use is of no good; for the body can get accustomed to everything, even to the most violent medicines. The carrot might be very appropriately called the regenerator of old worn-out horses. A horse which has been improperly treated, is fatigued, thin and exhausted, improves visibly when fed upon this generous diet. But if those who have the care of the animal are not careful to let it take regular exercise, or to take a little blood from it, or, better still, administer a strong purgative, they will find that, just when the embonpoint and vigour begin to be noticeable, the horse is seized with apoplexy, and perishes when it appeared to be completely made over again, and fit for work."

AGAINST HORSE-SHOEING.

Colonel M. C. Weld's noteworthy views on the abuse of shoeing horses, as lately expressed in the *Tribune*, have attracted deserved attention abroad as well as at home, and called out one striking statement of favourable English experience, the points of which we quote from the *Mark Lane Express*:

"About three years ago I was led to give the non-shoeing system a fair trial, commencing with a pony constantly driven, and extending the ex-

periment to the young farm horses, all of which had, however, unfortunately been shod before the trial began, and am now able to endorse the observations of Col. M. C. Weld, in almost every particular, except as regards travelling on paved surfaces, as in Southampton, where there is a tramway, it is found that the pony prefers the paved stoneway to the macadamized part on either side. The time that elapsed before the 'dead horn' of the hoof grew out was six months, and it was fully eighteen before the insensible frog lost its callousness and grew soft, like strong India-rubber. The pony does not work on the farm, but goes out nearly every day, the greatest number of miles run in any one week being eighty, and in any one day thirty-two.

"Before the shoes were removed it was somewhat of a 'daisy cutter,' had been down once or twice, and stumbled much going down hill; since discarding shoes it has never stumbled once, and I have driven it full trot down a hill covered with snow and ice. This pony had been shod up to seven years old. The farm horses are young and strong, and have been bred on the place, and though mostly employed in the fields, are frequently engaged in hauling corn, timber, bricks or manure, for home or hire purposes. No roads than those around Winchester can be more trying, repaired (?) as they are with flints, which have been broken just enough to make them out like razors, and are a cruelty to horses shod or unshod. I find no difference in the capability of drawing full loads. There is no stamping in the stable or when standing out; over asphalt or icy pavements there is no slipping; the feet do not ball up over snow.

"The great drawback is that against which all who try any new groove have to contend, namely, the unyielding prejudice of all classes, more especially those who have to look after the horses, who, rather than aid in any change, will throw every obstacle in the way, but to my brother farmers I say emphatically, the man who cuts the frog off, or shoes his young horse, is committing a great error. With a little care you may work them on roads or fields, the animals will be certainly happier and probably healthier, and yourselves be in pocket by the change, and with an occasional rasp the appearance of your horses will be far better than the torn, jagged, heavily-ironed and nailed feet of one-half the wretched animals it is painful to see about the country."

BREEDING FOR DRAFT—THE SHIRE HORSE.

A correspondent of the *London Agricultural Gazette* writes to that journal as follows:—

"The demand for sound, weighty, active draft horses, as well as the establishment of a Stud-Book for recording their pedigree, is already inducing breeders to pay much greater attention to the selection both of sires and dams; few men will now breed from old, decrepid animals, or from those suffering from disease of a hereditary character; a well-bred, comparatively old horse, when put to a young and vigorous mare, is almost certain to indelibly stamp the produce. The value of a sire depends altogether on the character of his stock; a very celebrated prize-winner, who carried all before him in the prize ring, has been a failure at the stud—the best of his produce has not been above mediocrity, hence the greatest care should be exercised in selecting a sire suited to the special characteristics of the mare, and whose stock are known to possess some merit. A popular sire frequently gets too much to do; a horse who travelled a Midland district this season had close on 200 mares booked to him; the fee, including groom, was 12s. 6d. down, and £1 if the mare proves in foal. It would have

been much more satisfactory to both interests had the fees been double, and only half the number of mares served. A really first-class stallion is very difficult to meet with. Many are led away by a massive carcass; this is a frequent accompaniment of upright shoulders, weak arms, and round cannons; the walk is the pace of a cart horse. Hence a sloping, well-formed shoulder is as essential in the formation of cart horses as in a hack. The legs should be placed well outside the body, so that, viewed either from the front or behind, the side, from shoulder to quarter, should form a straight line; arms broad and muscular; cannon bone flat, clothed with a fringe of nice, flowing, silky hair; short, upright pasterns are a very objectionable point in a cart horse. The feet should be of moderate size, wide at the heels and well dished. The strength, durability, and usefulness of the animal is mainly dependent on the conformation of the feet and legs. The most valuable characteristics of the Clydesdale are the well-formed shoulder and the superior conformation of their feet and legs. The most valuable horses to breed are not those best suited for the purposes of agriculture, but those of a heavier stamp, standing sixteen hands and upwards, proportionately grown, such as find favour with the railway companies and town draymen, though this class is generally worked on the farm until they reach the mature age of five or six years. At this stage sound, good specimens readily made from £80 to £120."

MILK AS FOOD FOR COLTS.

John E. Russell, Secretary of the Massachusetts State Board of Agriculture, in speaking of forcing the growth of colts by feeding extra milk, says he first tried Jersey milk and found that it did not agree with most of them; those that it did agree with fattened. Afterward he tried Ayrshire milk and found that that agreed with them and forced their growth of bone very greatly. The colts drank from twelve to fifteen quarts of milk per day besides the mare's milk and eating a liberal quantity of bruised oats. A little runt of a colt that was considered well nigh worthless was put on this diet, and on it grew to be the most renowned "Parole."

LICE ON GATTLE.

The *National Live Stock Journal* is authority for saying that the cheapest and one of the best means of ridding stock of lice, consists in the free application of wood ashes, frequent brushing, removal of old or dirty bedding, occasional application of boiling hot water to the wood-work of stalls, sheds, and sties, or lime-washing of the same. All loose hairs and dirt removed from the bodies of animals by brushing, as well as old bedding, should be collected in a heap and burned. The presence of vermin on live stock can never be successfully combated by simply applying a certain remedy to the body of the animals, and not at the same time attending to the general cleanliness of these, as well as of their surroundings.

Cows often wander over the pasture searching for bones, which they chew eagerly. The reason is that the land is deficient in phosphate of lime. Supply the deficiency, and in the meantime give the cows a little bone meal.

There is a cow in Pennsylvania that goes limping through life with a wooden leg. What a bonanza the owner would have if he could turn that leg into a pump, and make the animal stand in a stream of water while he was milking.

CURRENT NEWS ITEMS.

Mr. W. H. CONANT, Oshawa, has purchased the four-year-old colt "Rifleman" from Mr. Allen Trull, for \$1,200.

ONE bushel of the "Early Ohio" variety of potato was raised by Mr. Harvey, of East Durham, Quebec, from one potato planted last spring. So says the *Cowansville Observer*.

THE farm of David Grisley, about three miles out of Portage la Prairie, Man., yielded him during the harvest just past 45 bushels of wheat and 55 bushels of oats to the acre.

THE Minnedosa, Man., *Star* says that the rain which fell on Wednesday last was the first shower since July the 26th. Has any other Province had two months of rainless harvest weather?

"THE Cockshutt Plough Company," with a capital stock of \$100,000, has applied for incorporation. The company purposes carrying on the business of manufacturing and selling ploughs, cultivators and other agricultural implements throughout Canada.

ALMOST every variety of production is being discovered in the North-West. At Lake Winnipegosis salt deposits have for some time been known to exist. Along the Souris River coal has cropped out in plenty, and farther west indications of silver, gold and other minerals have been discovered.

A FINE team of light roan draught horses, two years old, weighing 2,900 lbs., were exhibited by McDonald Clarke, of Lucknow, at the Western Fair held at London. The animals attracted the attention of Messrs. Merrills and Brown, two Winnipeg gentlemen, who purchased them for \$600, paying also \$52 for the harness.

THERE were brought to this office this week, by Mr. McGrain, four Early Rose potatoes taken from one hill in a patch on Sugar Point, which weighed in the aggregate 4½ lbs. Mr. McGrain had also a potato with him weighing 1 lb. 2½ oz. He stated that he had another specimen at home, which he was keeping as a curiosity, eleven inches in length.—*Selkirk Herald*.

THE fruit trees of Innisfil are showing queer signs of the vargarics of nature this fall. A number of fruit trees on the 8th Con. are beautifully out in blossom, apple and pear trees are in full bloom. It is thought that the trees did not blossom right in the spring, and that recent rains succeeded by the warm weather has brought out the flowers now.—*Simcoe Witness*.

THE Port Perry *Standard* has some big stories. It says Mr. R. W. Walker, of the 4th Con. of Reach, from 8 lbs. of potatoes, of the "White Elephant" variety, raised 510 lbs. Mr. J. B. Lazier has informed us of another almost incredible yield. He planted one bean in a hill, and noticing, when pulling it, that it had a large yield, thought he would count them, and actually there were 474 beans in the hill—all from one bean!

MR. MARK AYRES, employed with Mr. M. D. Williams, butcher, has shown us a collection of nails of different sizes, screws, tacks, old rivets, pieces of wire, chunks of small iron, part of an old snap, and two or three pieces of zinc, a lot of small stones, pebbles, shot, etc., which he took from the stomach of a cow killed by him on Saturday, the whole collection weighing three-quarters of a pound. One of the nails—a three-inch one—had penetrated through the stomach, and the point was sticking about an inch into the heart of the animal. The beeve was a fine one, in good condition, and did not appear to be at all affected, by having such a curiosity shop in its stomach.—*Bowmanville Statesman*.

GOOD PAY TO AGENTS.

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

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Publisher.

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

The Rural Canadian.

TORONTO, OCTOBER 16TH, 1882.

THE PROVINCIAL EXHIBITION.

As an Exhibition, the Provincial was this year a decided success. It was popularly supposed that the decision of the Directors to take it to Kingston would cause the Western exhibitors, especially of cattle, to remain at Toronto, Hamilton, or London. But the supposition proved to be fallacious. A better show of cattle has scarcely been seen than that on Kingston fair grounds.

The number of entries, though not exactly made up yet, was between 8,500 and 9,000. This is only between 500 and 1,000 less than usual. And the character of the exhibits was most excellent. As said, the show of stock was exceptionally good. The Shorthorns were out in full force, whilst the exhibit of Herefords, Polled Angus, and Jerseys has never been equalled. The Polled Angus are rapidly growing into as great favour with our breeders as they are with the British ones. It is only six years since the Agricultural College Experimental Farm first introduced them to Provincial notice, and already there are quite a number of herds. A fine herd of Galloways, fresh from quarantine, shown by Mr. McCrae, the veteran breeder of that kind of cattle, was much admired. Two special exhibits of cattle attracted much attention. These were those of Mr. Whitfield, of Rougemont, Province of Quebec, who showed Polled Angus, Sussex, Devon, Galloways, and West Highland cattle, all of a superior character. A bull of the latter breed he added to the second collection, which was that of the Agricultural College Experimental Farm. This collection was more to show the results of feeding on cattle and sheep than for pure exhibition. Printed cards, giving the age of the animal, the daily rations during the months of its life, and the results in pounds of flesh and wool, were attached to the stalls and generally distributed. The animals were not for competition, but their exhibition must tend to give an impetus to the careful study of experiments made by our farmers, whilst the results are of incalculable value for practice. The fat cattle were excellent, as the Wellington ones usually are; and the best of them found a purchaser in Mr Longworth, of the Prince Edward Island Government Farm.

The display of horses was exceedingly fine, especially in the department of carriage horses. Many of the Western breeders were astonished at the perfection and success of their Eastern brethren in this line. The show of sheep served to prove the rapidly growing favour of the Downs. Shropshire and Oxford Downs had the readiest sale of any class of sheep. But the show of all classes, both short, medium and long-wooled, was good. Pigs of all the ordinary breeds were out in the customary quantity and quality, though we thought that the Berkshire were scarcely up to the customary mark all round.

One of the most noticeable features in the exhibition was the ready and satisfactory sales of all kinds of stock. Never in the history of the Provincial has this been more marked. In none of the

district exhibitions was it this year at all equal to the Provincial. The report of Professor Brown upon the Live Stock department of the Provincial, as requested by the Directorate, will be looked for with pleasure and expectation by the exhibitors as by the general public.

The exhibits of grain and roots were not so large in quantity as usual, but were fully equal to the average in quality. That of fruit was superior to any show—district or otherwise—seen in the Province this year. Only in the East has the fruit crop been at all a success, and this fact accounts for the satisfactory exhibit.

The manufacturers of agricultural implements were out in full force—the Eastern makers especially—though the best of our Western ones were also there. The department of heavy machinery was far above the average—the best shown this year in the Province. The main building was highly creditable to Kingston, there being a full display of all the articles usually found there. That of ladies' work and fine arts was a credit to the ladies and artists of Eastern Ontario.

The special features of the Exhibition were all of a purely agricultural character. The Manitoba exhibit, under the direct charge of the Deputy Minister of Agriculture, Mr. Acton Burrows, was the theme of universal remark and examination. Never has that Province appeared to such advantage, for everything was of the most superior character. The special milk test, for which a prize was given by the Dominion, resulted in a Shorthorn grade, instead of an Ayrshire, winning the prize, contrary to general expectation. The two special exhibits of stock we have already mentioned.

At the annual meeting the able reports on Prize Farms was brought in, as also that on Essays. We shall have something to say on both in a future issue, and will not at present do more than commend this feature of the Society's work, and the efficient and successful manner in which it is being carried out.

It is to be regretted that the very wet and decidedly cold weather prevented the Exhibition from being a financial success. But for that, it would undoubtedly have been one. Thousands of people came into Kingston who never went up to the Fair Grounds, thousands of the citizens never reached them, and doubtless the unpropitious weather kept thousands at home who would have gone. The funds of the Society can stand the loss, and the educational and other benefits to agriculture in Eastern Ontario are well worth the cost.

THE DANGER OF RAILWAY MONOPOLIES.

By the fusion of the Grand Trunk and Great Western Railways the farmers of Ontario are threatened with the evil which has been so keenly felt throughout many of the States of the neighbouring Republic. Before the fusion those two lines had absorbed almost all the smaller railways in the Province, though these for some time had indeed but acted as feeders to the Trunk lines. Those smaller lines were built largely from the proceeds of bonuses granted by the municipalities to them, and by grants from the surplus lying in the Provincial Treasury. But neither the by-laws under which those bonuses were granted, nor the Orders in Council or Statutes under which the Provincial grants were given, contemplated or provided for the contingency of monopoly. By purchasing the bonds when they fell due on the market, in many cases for a mere trifle, the two lines named obtained a controlling interest in the directorate of the smaller ones, and in this way became virtually their masters. But now, when these two lines are amalgamated and obtain, as

they doubtless will, a controlling interest in the one or two independent roads still remaining in the Province, they will speedily become masters of the situation. It remains to be seen whether they will also become masters of the public.

We are pointing out no fancied danger. It is the deliberate opinion of those best qualified to judge that in the course of a few months, or a year at most, the only two independent railways in the Dominion will be the Grand Trunk and the Canada Pacific. Though a freight war between the two would be the immediate result, yet all experience tells us that pooling receipts, and in this way virtual fusion, must be the ultimate issue. Whether by any precautions such a result could have been avoided is extremely doubtful. It would seem from our twenty years' experience on this continent that no matter what restrictions enter into legislative or other contracts with railway corporations for assistance in construction, such contracts are invariably broken. If no loophole can be found in the terms of the contract, any and every means, even to the buying up of representatives to the State Legislatures, are employed to enable those contracts to be voided. When one railway cannot accomplish the end sought many unite to form a "ring," and through their united exertions the desired legislation is obtained. Fusion and consequent monopoly seems to be the necessary laws of railway progress. For the aggregation of capital requisite for construction and operation is so great, that the power placed in the hands of a few men is similar in result, though different in nature and degree, to that exercised by the great landed Barons of the Middle Ages. And railway communication, efficient and progressive, is indispensable to individual, municipal, or national advancement in the rapid march of civilization.

If, then, we are obliged to accept the amalgamation of our railways as a necessary evil, it is incumbent on us to find some means whereby the national and sectional evils which must arise from such amalgamation shall be minimized, if it cannot be abated. Such means have been found in some of the States of the neighbouring Union in a Board of Railway Commissioners. But it has been found impossible for a State Board to deal effectively with those lines which only run through and have no terminus in the State. For the mere purposes of State taxation they are tolerably efficient, but as a thorough preventative of the evils of railway monopoly in freight or passenger traffic, especially the relations of the local to the through traffic, they have proved only a very partial success.

The most successful and efficient agency must, from the very nature of the case, be a Federal Board of Railway Commissioners. That has been found to operate well in England, though there the problems of the relation of local and through traffic are not so keenly felt as on this continent. It is the agency that must be established in our Dominion, and established immediately. What is needed is a Dominion Board of Railway Commissioners, clothed with the fullest powers exercisable within the Constitution. And there must be no restriction of those powers, and no circumscription of their exercise of those powers within due constitutional limits; for it is in this respect that the railways will seek to curtail the efficiency and success of such a Board.

This is a question which affects every citizen and every industry; but it prejudicially affects most of all ourselves, and the great agricultural industry. For in the moving of the grain crop and every agricultural and animal production is there the greatest opportunity for the exercise of monopoly powers and privileges. For the last two sessions such a Board of Railway Commissioners

has been advocated by Mr. D'Alton McCarthy, M.P., in the Dominion House of Commons. The influence of the railways has hitherto been great enough to defeat it. Let it be thoroughly shown that the country, and especially the farmers of the country, imperatively demand the establishment of such a Board, and the immediate establishment of it. Let every Township Council and every Agricultural Society at its annual fall meeting after the exhibitions prepare and forward petitions to the Dominion House of Commons praying for the establishment of such a Board. Only by such united and zealous efforts can the evils that threaten us be averted. And they are no dream. They are at our doors. Let apathy be abandoned. Let action such as we have indicated be the duty of the hour. Let petitions from one end of Ontario to the other pour into the Federal Parliament at its next session. And let every farmer watch the proposed legislation, and the course of his own representative with regard to that legislation. If the railways can emasculate it when proposed, rest assured that they will. Let it, therefore, be carefully studied. In the presence of the gigantic evils of railway monopoly, and of all such modern aggregations of capital, the old motto that "eternal vigilance is the price of liberty" receives a new and intensely practical signification. If we suffer from those evils we will have ourselves to blame. Action, immediate action, in the direction indicated is imperatively needed.

REPORTS ON AGRICULTURAL STATISTICS.

The able and extremely interesting reports that have been issued, from the Bureau of Industries, by the efficient and indefatigable Secretary, Mr. A. Blue, are to be brought to a close on the 1st of November. The following circular has been issued from that office, to all the correspondents. We shall give our readers, as we have each month done, the substance of the promised November report, and review the season's work of this Bureau. It has been a most busy and most successful one from the first. Following is the circular:—

Dear Sir,—The last Monthly Report of the Bureau for this season will be issued about the 1st of November. It will contain tables of all agricultural statistics collected during the year, revised and corrected according to the latest data, a summary of the progress of Fall work, the condition of live stock, and other information of special interest to the farmers of Ontario.

You are invited to report for your township or district on the subjects outlined in the schedule below, and to mail the return in the enclosed envelope any time between the 20th and 25th inst.; if not sealed it is postage free. In some instances the returns of correspondents have not been received until the Report for the month was published, when of course they were too late to be of any use. This shows the importance of mailing promptly.

The variable character of the season has been well calculated the show the value of underdraining. A light fall of snow in Winter, spring frosts and cold spring rains, midsummer drouth, a heavy rain-fall during harvest and a second season of drouth at the time of fall seeding were a severe test to all inefficiently drained lands. A full report on this subject is desirable.

Returns are being received from threshers of the produce per acre of wheat, barley, oats, peas and rye, as found by actual results. Possibly these may not be complete for the whole Province, and you are asked therefore to report the average yield of those grains in your locality, as well as of other crops named in the schedule; also the average of Rent and Wages.

The other features of the return now asked for do not need specific reference; their scope and object will be clearly understood. I shall, however, be glad to have correspondents who make a specialty of any department of agricultural indus-

try report at length on matters relating to their particular interest.

It is due to the correspondents of the Bureau that I should acknowledge the intelligent part they have taken in its work. Their returns have been on the whole very complete and comprehensive, and many valuable practical suggestions have been received from them, both as to method and subjects of inquiry. Yours very truly,

A. BLUE, Secretary.

The Jubilee Singers, who have charmed the most select circles in the Old World with the sweet melody of their voices, are now making a professional trip through these Provinces. They will visit all the principal towns and villages of the Dominion; and will, doubtless, everywhere meet with full houses. When they reach your neighbourhood, dear reader, do not miss the opportunity of hearing these cultivated singers. It will be a rich treat—a pleasing memory in after years!

We are in receipt of Nos. 1 and 2 of the *Nor'-West Farmer*, published at Winnipeg, Man., by the *Nor'-West Farmer Publishing Co.*, of which Mr. L. K. Cameron, lately of the *London Advertiser*, is the manager. The paper is published monthly, presents an attractive appearance, is full of just such reading as will prove useful and interesting to the prairie farmer and household, and is sure to prove a great success. There is no better agricultural journal published in the Dominion to-day, and certainly no other so well adapted to the wants of *Nor'-West* readers. Only \$1 per year.

THE PRODUCTION OF BEEF AND MUTTON.

The following is a synopsis of the paper read by Prof. Brown, of the Ontario Agricultural College, at the annual meeting of the Agricultural and Arts Association, at Kingston:

He said it was much to be regretted that scientific bodies had left to individuals the inquiry into the science of producing these articles of human food cheapest. The most simple and most natural way of producing these articles was by grazing, but conditions were not always favourable. The aim of the modern agriculturist was to secure the greatest amount of beef and mutton in the shortest possible time. To learn what foods were best calculated to produce this result, and how to obtain them cheaply and in abundance, was a difficult problem. It was now allowed that three years for cattle and one year and a half for sheep should be the time for maturing, yet science had not yet said whether the flesh of younger animals would or would not be as good for human food. No men agreed either upon the cost of producing these animals. Entering upon the practical consideration of producing beef, he supposed the case of a steer weighing when bought on 1st of October 1,050 lbs., costing to the purchaser \$47.50, on which the breeder or seller has a profit of 1½ cents per pound, calculating all the feed at cost and allowing for the manure—the practical mode of dealing with this animal, so as to produce the best results in beef, with the smallest possible expense. In case of old land it was absolutely necessary that fertilizers should be used, and he claimed that nothing would take the place of the barn-yard manure. Animals giving milk or those still growing could not give first-class manure. On the other hand they did not want aged animals, because they would cost too much per pound, were slower at flesh making, and practically they could not be got. Taking the animal referred to, he recommended careful housing, avoidance of draughts and changes of temperature. Let the

temperature be steady, somewhat low rather than changeable. It was a mistake to shut the door on sheep, except in cases of ewes just lambed. Not only ventilation, but drainage and proper light also were necessary. Native grasses gave all that could be required for the completion of growth, fattening, or milking, but these fodders were found in practice to be too slow. Mixed food was found to be the best, and grain had a more fattening effect according to weight than other classes of food. In regard to preparing food, he had come to the conclusion that uncut hay and roots were the most healthful but least economical, leaving much refuse. Cut fodder and pulped roots, allowed to slightly ferment, were economical and well adapted for both feeding and milking, and that steaming food was unnatural. Loose box management and prepared raw food were wisest. Animals should have all the water and salt they could use, and five meals a day should be given, and change of food, not too rapidly made, was beneficial. Curry-combing should not be oftener than once a day, but if judiciously done would add \$4 to the selling price of the animal. He quoted figures to show that the turning of fodder into beef did not pay of itself, but that the manure from the animal was what made the margin of profit, while practically grain, etc., fed cattle might be counted as sold at the profit which they would bring in the market. It did not pay to hold cattle after they were fattened up to 1,500 lbs. A variety of causes had led Canadians to produce more beef than mutton, but he claimed it could easily be shown that the latter was the more profitable crop. By crossing the ewe of the country with a thoroughbred ram, just the sort of animal required for wool and mutton could be obtained; and with liberal feeding, and selling the produce after the first shearing, good results would be obtained. In conclusion, he stated that in order to make more complete the description he was writing of the stock, he had asked 1,800 breeders by circular for information, and had found there was only one thoroughbred bull to every 100 farmers in the Province, and four pure-bred cows to every pure-bred bull. A thousand head of pure-bred calves were dropped every year, at which rate it would be fifty years before every farmer had a thoroughbred bull, even were none removed from the country. In sheep, for every thousand head of grades the Province had but one pure-bred ram. Were it more difficult to make a living directly out of the land no doubt our live stock prospects would improve.

Mr. G. F. Frankland, of Toronto, was called upon to speak, and after saying a few words of high appreciation of the address of the President, as well as that of Prof. Brown, went on to say that notwithstanding that it was a great feat to bring cattle to such a tremendous weight as 2,000 pounds, he had always found that in England he could do much better with animals weighing from 1,400 to 1,600 pounds. He found also that sheep shown by Mr. Hood, of Wellington, were a cross from the Oxford Down ram with the Canadian sheep. He had carefully examined them, and had made up his mind that when slaughtered the meat would show more lean than in other cases, which was just what was wanted. The export trade was becoming a more regular business than it was, and dealers could not expect the profits they used to have. The fact was freights were lower and the prices of cattle were higher, so that farmers got the benefit of the increase of trade.

An eccentric old gentleman, being waited upon with his surgeon's bill, cogitated some time over its contents, and then desired the man who called with it to tell his master that the medicine he would certainly pay for; but as for the visits, he should return them.

SHEEP AND SWINE.

THE POLAND CHINA HOG.

The accompanying cut is a very good representation, perhaps rather flattering, of the style and appearance of a breed of hogs which, originating, we believe, in the Western States, has become very popular on the other side of the lines, and has recently made its way into Canada. So far as its merits are concerned in the line of pork production, it ranks very much on a par with the Improved Berkshires. We are not aware that any point of superiority is claimed for it over that well-known and excellent family. Consequently the choice of it is very much a matter of taste. The distinguishing feature seems to be the lop ear, but, for our part, we prefer the pointed, pricked-up ear of the Berkshires.

CLOVER FOR HEALTHY GROWTH OF HOGS.

It came in my way last summer to frequently pass a field of clover which had been fenced off for a hog pasture, and noticing the amount of feed and the thrift and the general appearance of the hogs, I called upon the owner of the farm for an interview.

"Oh, yes, I can give my opinion and the results. That lot we call twenty acres, including the small grove and spring in one corner. We sowed it with oats last season, and stocked down with clover, part Medium and the balance Mammoth. The first of June, this summer, we turned in ninety hogs, but this made no impression on the clover, so we turned in ten colts, fifteen head of young cattle, and fifty sheep, and altogether they managed to keep it within bounds. About the first of August we took out the cattle and commenced seeding corn."

"Could you discover any difference between the Medium and the Mammoth clover as to its food value?"

"Yes: the Mammoth was much the best; it kept green longer and would have yielded a large quantity of hay. Now as to results: A few days ago I took a car-load of these hogs to Chicago, and the average weight of the forty-two, to fill the car, was a fraction less than 400 pounds, or in other words, the forty-two hog weighed 17,940 pounds, netting the snug little sum of \$1,078, and I received five cents per hundred more than any hogs sold in the market that day, because they were in a nice, even splendid condition for the Philadelphia market. The balance of the lot will be ready to ship in a few days."

Notwithstanding this farmer cannot give us the exact weight of the hogs when turned into the clover pasture, nor the gain in pounds on the first day of August, yet I am sure that the facts as given will warrant the oft-made assertion that a clover pasture is the most profitable feed for young hogs. One of our large breeders of Poland-China hogs, who has been breeding fine stock for years, says, that he has never had a single case of hog cholera on his farm, and he attributes it to the fact that he always lets his breeding stock run to clover pasture. The fact is, a large majority of our farmers and breeders are breeding for fat and show, and the warp or muscle is not sufficient to hold the filling, and hogs are getting organic disease by this continued cramming process.—*Swine Breeder's Journal*.

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SHEEP IN WINTER.

Two extremes should be avoided in the matter of shelters. One may be insufficient, while the other may be so close as to be unhealthy. The majority of mistakes are with those who shelter insufficiently. In such instances more food is consumed than would otherwise be required, and no corresponding benefits accrue, though the effects upon the sheep are not so unfavourable as those following confinement to improperly ventilated rooms. Another error is found in too close crowding while under shelter. This is particularly objectionable when any considerable number of animals are confined together. While a portion of them may lie down, others are compelled to stand; and, through restlessness or fright, often trample upon and injure their fellows. The shelters on the sheep-farm should be made to increase in size as rapidly as the flock multiplies its numbers.

The water supply should be carefully looked to. A flock of a given number will drink more water in winter than will be needed when on pasture. If such an arrangement can be economically secured, access to water twice a day is better than but once. This for two reasons. First, the more timid animals which are likely to be held back in the morning by their stronger fellows, have a chance when the latter are not so eager; and,



THE POLAND CHINA HOG.

secondly, all danger from over-drinking of cold water is obviated. Use of snow in lieu of water should be forced upon the flock only under the extremest necessity. Stock will live under such circumstances; but satisfactory thrift will not be secured.

Ewes in lamb should, as far as practicable, be fed and sheltered separate from the non-breeding animals, as the crowding and more rapid movements of the latter are apt to result injuriously, while such separation makes more convenient certain little attentions to which breeding ewes are entitled as the weaning season approaches, and which may be profitably accorded to them. Advantage will be found in subdivision of the several ages and sexes into as many smaller lots as circumstances will admit of, as such course lessens the liability to crowding and overfeeding of the stronger animals, at the expense of the weaker ones. It also brings each animal more directly under the eye of the attendant, who will the more readily detect the first symptoms of deviation from the desired thrift.—*National Live Stock Journal*.

SWINE IN ORCHARDS.

While in a general way it may be well to allow hogs to run in the orchard, as recommended by Colonel Curtis, I think there are times when it will be better to keep them out. Surely they have no business there when there are no apples

for them to pick up. After the apples have been picked and the trees shaken, I would let hogs in long enough to clean up every apple not taken to the apple room or cider mill. During an open winter, and in spring when the ground is soft and wet, the tramping is damaging to the soil and to the fine rootlets which fill it. The Colonel might at least make that slip-gap so small that only the shoats can pass into the orchard. They are lively and greedy, and light of foot, and will clean up every apple or worm or grub or larva within reach.

Again, the shoats will not pack the ground, or damage young trees by rubbing against them. A full-grown hog has a very rough hide, and it takes a deal of vigorous rubbing to satisfy the pachyderm. I have seen ten-year-old apple trees have the bark loosened by hogs rubbing against them in the early summer, when the bark slips easily. This danger is more imminent, too, in a thrifty young orchard. If he will limit the time from June to December, and allow only the shoats to have access to the orchard, his recommendation will not entail damage to the soil or to thrifty young trees, and yet give time and opportunity for the industrious shoats to help him save feed and protect his coming apple crops. This is no theory, but practical experience.—*L. N. Bonham, Butler Co., O.*

CROSSING WITH SOUTH-DOWNS.

Although the Cotswold possesses large frame and long fleece, it is not suitable for farmers where pastures are not of the best quality. The Merinos, when used for crossing, do not increase size, although the grade of wool is better. The Southdown is best for use on common flocks, as they are bred for mutton in preference to wool, and being hardy and active, the cross is less violent than those between Cotswolds and our small natives. The wool from the Southdowns is not inferior, being classed with the

middle grades, nor is it deficient in quantity as compared with common stock, but much above the average. Their excellence is in the superiority of the mutton, and in that respect they have no rivals.

FARMERS who have not a large pasture for their hogs, should build a few rods of portable fence, and make a small enclosure for them, and move it around as circumstances require. It will make pork-raising more profitable than to keep hogs confined in pens all the time, and keep hogs more healthy.

Long grass is distasteful to sheep; they never feed it down evenly, but will trample down half of what they do not eat. They seem to do better on the aftermath of grass, but they should not be allowed to feed it too close, or it will be long recovering. A frequent change from field to field is better than giving them a long range; the latter often encourages them to rove and makes them discontented.

Mr. Born has at his stock farm, says the *Lindsay Post*, a small but fine flock of Oxford Down sheep. They are thoroughbred, and with their fine shape, and black heads and legs, at once command the attention and admiration of the farmer. It is the beginning of what will ultimately become a large flock. The Oxford Down is admitted to be one of the most valuable breeds for mutton and wool, and it is also specially adapted to this part of Canada.

BEES AND POULTRY.**FATTENING FOWLS.**

What a different taste a fine, nicely and quickly fattened fowl has when served on the table, compared with one which had been forced to scratch for all its living, and to be consigned to the spit in anything but a fit condition for food! Farmers realize the importance of fattening quickly when feeding bees for the butcher, yet many do not seem to realize the fact that what holds good with that kind of meat it equally true when applied to fowls. Tenderness and juiciness are results of fattening quickly, while more ordinary flavour and want of tenderness results from letting fowls run until wanted for use on the table. To enable one to fatten fowls or chicks quickly, it is absolutely necessary to give such food as will accomplish the purpose best, and to this end we unhesitatingly recommend plenty of milk, in any state from fresh to thick. This should be fed in connection with a grain diet, for one counteracts the other. If kept in a darkened place and fed unsparingly on milk, with grain food in the proper proportions, you will soon have something very choice to set upon your table to your friends, as well as your family. When milk is fed no water is required for fattening fowls.—*Poultry Yard.*

KEEP YOUR BEST BREEDERS.

On no consideration should the fancier dispose of his best breeding stock, unless he desires fresh blood to keep up the stamina and constitutional vigour of his fowls by procuring the same kind of first-class stock, but not related, to take the place of those he has been breeding from. At this season and in the spring-time there is a brisk demand for good breeding stock, and those who need such and know their real value are willing to pay a good price for them. Breeders who are fortunate to have raised a goodly share of early-hatched birds can now supply their customers with prime young stock without lessening their breeding pens. But sometimes there is a big price offered for some of those retained as breeders that looking so tempting the owner parts with them, thinking that some of the young stock would in no way be inferior as stock getters. The possession of the best possible breeding stock is a matter of consideration and of paramount importance to every breeder of thoroughbred poultry. The best is not too good; but when one becomes the possessor of extra stock getters, reliable in the uniform products that come from them, it would be poor policy to sell them although offered a big price. If the would-be purchaser considers such fowls equivalent in value to what he offers in cash for his special use as breeders, why would not the same fowls in the hands of their owners be as valuable for the same purpose?—*Poultry Journal.*

TREATMENT OF FOWLS.

It is very necessary that fowls should have a good supply of pure, fresh water every day; and it should be put in the shade, so that the direct rays of the sun will not make it hot and impure before the fresh is supplied. One of the best things, and probably one of the simplest, is to keep a handful of old rusty nails—the more rust on them the better—in each dish from which the fowls drink. This will go far toward keeping them in good health, making them strong and vigorous, and less liable to disease. Fowls seem to require something that will act as a tonic, thus toning up the system, so that they will be in a better condition to throw off disease. Their increased vigour can readily be detected by

their vivacity and the rich colour of the comb, which is a sure indication of health. The comb of a diseased fowl always loses colour in proportion as the disease approaches its worst stages, and in some instances turning black. We would advise those who suspect disease amongst their fowls to give this subject thoughtful consideration and study, remembering that prevention is always better than cure.

BREEDING THE BEST QUEENS.

We deem it a very great mistake to suppose that the queen that can lay the greatest number of eggs in a given time is therefore a desirable queen; but if a queen bee is capable of laying 500,000 eggs in a life time, shall we have them laid in two or four years? We should prefer their being laid during the longer period. All such questions should be well studied and properly digested by the apiarist as well as giving a strict adherence to natural laws governing the bees. When we look into the laws that govern the production of animal life, we find that one law obtains from man down through all the grades of lower animal life, viz.: "The animal after his kind." While climate and surroundings have their influence, man is still man, whether barbarous or enlightened, and his domestic animals when bred with any special peculiarity or trait in view, have developed the traits desired, while there are many desirable traits in our present strain of Italian bees that should be fostered in breeding. Queen breeding is a mechanical art, and should be better understood by those who make such loud professions and furnish too many cheap and worthless queens for the unsophisticated novice, who too often meets disaster and loss for want of a better knowledge of the true principles that should govern all business connected with successful and practical apiculture. Avoid all queens reared in small nuclei or weak colonies.—*From the Granger Bulletin.*

KEEPING EGGS.

There are several ways in which they may be kept for months with more or less loss of freshness and flavour. But whatever preserving medium is used, the sooner the eggs are placed in it after being taken from the nest the better. If they are allowed to lie around exposed to the air even for a day, or if they are handled and shaken in the least, their keeping qualities will be greatly impaired. The old-fashioned method is to stand them on end in dry salt, in a keg or box, being careful that they do not touch each other, and that the salt fills all the interstices; when the keg is full head it up, and turn it over once a week. Or coat the eggs thickly with sweet lard, and pack in the same way in bran. Or pack in powdered, unslacked lime. Or dissolve quicklime in water, making the solution as strong as possible, add as much cream of tartar as the solution will take up, and put in the eggs, taking care to keep them covered all the time. A French process, much recommended, is to make a varnish by melting together beeswax and linseed oil, and thoroughly coating the eggs with it, packing them in boxes with paper pasted over the cracks to exclude the air. The object of all these processes is to exclude the air, which would otherwise find its way through the pores of the shell. It should be added that the eggs should be stored in the coolest and driest place possible.—*N. E. Farmer.*

PLANTING FOR BEE PASTURAGE.

Two of our correspondents propound the following questions in regard to planting for bee pasturage:

1. What time of year is best to sow sweet

clover, and how much per acre? 2. Can I sow it this fall with grain? 3. Is it of any use for hay? 4. Where can I get some seed of the Simpson honey plant?

1. In early fall is best, then you will get some bloom the next season. If sown in early spring, catnip, cleome, motherwort, or mignonette can be sown with it to give a honey bloom the first season, after which the sweet clover will take care of itself. If sown alone, we would prefer about 8 to 10 pounds per acre; if with something else, 4 to 6 pounds per acre. It should be sown early enough to get a good freezing, which will not hurt catnip or motherwort. Cleome must be sown in the fall.

2. Yes.

3. We have heard the question answered both affirmatively and negatively; but think if cut early it would make excellent hay, certainly equal to red clover. We know it makes good stock pasture.

4. We do not know, but suppose it will be advertised in our columns by those who may have it for sale.—*American Bee Journal.*

DO BEES INJURE GRAPES?

At the late meeting of the Northeastern Beekeepers' Association, the charge that bees injure grapes was discussed with some feeling. Two bills have been introduced in the California Legislature to forbid the keeping of bees because of the damage they are said to do the ripening grapes. The Northeastern Beekeepers were unanimous in the opinion that honey bees never puncture the skin of the grape, though they frequent the vines to suck the juices of the grapes already injured by birds or other insects. This it was claimed has been demonstrated by careful tests. Black ants are the chief mischief makers.

Mr. J. S. PEABODY, of Denver, suggests that bees are "crosser" in Colorado than at the East, possibly because "the honey is thicker, which prevents their filling themselves readily."

THERE is more money by half to be had annually in good poultry raising (considering its cost) than can be realized from the pigs or sheep on the farm, and yet the latter are fed and housed and bred by many to the neglect of fowl stock. Good fowls of any improved breed may now be had at a reasonable price, and cheap houses can be built to shelter a hundred or two birds. There is very little labour to be performed in the proper care of a few score of nice fowls during the breeding season. Farmers will do well to look into the merits of this thing.

A POULTRY-HOUSE may be very quickly and effectively cleaned out by first using an old broom and removing cobwebs, dust, etc., and cleaning the floor with a shovel. Then take half a bushel of lime and slake it in a barrel. If one of the syringe or fountain pumps used for washing windows can be procured the lime may be syringed all over the inside, forcing the lime into every crevice and cranny, and thoroughly cleansing them. The lime that falls on the floor will sweeten that. When the work is done turn out the refuse lime for the fowls to pick at.—*Poultry Nation.*

NEVER use cruel means to break a hen of sitting. After you are convinced that she has the "incubation fever," take her from the nest and confine her in a nice, dry coop; keep feed and water before her. After four or five days' "treatment" she will not return to the nest. She should be removed with the other fowls to the roost every night, otherwise she may go to sitting in the coop. In a few days she will be feeding with the other hens (instead of wasting away on the nest or contracting disease in a filthy coop), and will soon be ready for the next season of "egg-fruit."

HOME CIRCLE.

TOPKNOT.

BY MRS. C. M. LIVINGSTON

(Concluded.)

One warm afternoon Mrs. Lane had gone out on the back porch in quest of a cool place. Busily engaged with her sewing, she was presently startled by a peculiar cluck! cluck! quite near her, and looking up, what should her astonished eyes discover but Topknot, waddling triumphantly along at the head of a long line of downy yellow chicks, as proud and happy a mother as ever was at the head of a family. Mrs. Lane tried to think for a moment that her eyes deceived her. But, no; there was Topknot's gray and white feathers this time, sure enough, and there was no mistaking, either, the bright eyes and pert little head, with its pink tuft.

At any other time Mrs. Lane would have gone into raptures over the small puff balls, and have been quick to congratulate the complacent little mother; but as it was, a humiliating sense of the great injustice she had been guilty of was all the sensation she experienced at the sight of Topknot's thriving family. She did not stop to discover what was the hidden motive that caused her to hastily decoy Topknot to the barn, by means of a dish of corn, and there proceed to tie a string to one of her legs and fasten her securely. To keep this miserable biped out of sight was now most important. To that end her mistress had a coop constructed as soon as possible, and placed behind the barn in the far end of the lot.

If Mrs. Lane had trouble before, she was in whole seas of it now. It had been as gall and wormwood before to live in such a state of alienation—to see Mrs. Butler neighbouring with Mrs. Hale just opposite, making calls and visits together, just as they two used to do; and then what tortures to behold, one fine afternoon, all the ladies of her acquaintance file up Mrs. Butler's walk, dressed in their best! Did she ever think, in those pleasant times that were gone forever, that her neighbour would one day have a tea-party and she would sit at home viewing it from afar? But now conscience applied her whip, and bade her confess how unjust she had been. Ah! there were mountains of difficulty in the way. Ever since childhood it had been the hardest possible thing to say, "I was wrong." Still, she would do it now, if it would be of any use. If it were but some dignified affair that caused the trouble, it would be different; but this shameful thing—one poor little hen! Suppose she should go and confess, what could she say? She should have to admit that she believed her friend to be actually guilty of taking what belonged to another. That was exactly what it amounted to, put into words, and how would that high-spirited woman scorn her and her confession! It seemed now as if she must have been insane to let such a suspicion take possession of her. If only those unfortunate words had not slipped from her! If only that deceitful Mrs. Ketchum had not told it! It will be a lesson to me, she often told herself. "I never shall again say anything about a person that I would not say to their face."

And so, night and day, she had no peace from an accusing conscience. In all her pleasures there was this thorn rankling. She never knelt to pray but the words, "If thou bring thy gift to the altar and there rememberest that thy brother hath aught against thee, leave there thy gift before the altar, go thy way, first be reconciled to thy brother, then come and offer thy gift." She had been a warm-hearted Christian, despite her suspicious nature and her imprudent tongue; and now a great wall seemed to have arisen between her and all divine comfort. She began to absent herself from church and shut herself in from society, and to lose the lively flow of spirits that had brightened all about her. Memory aided conscience to torment her. She wept sorrowful tears as she called to mind the many kindnesses Mrs. Butler had showered upon them when they came, strangers to the village; how, when they were sitting down to a bare tea-table that first night in the new home, the new neighbour made her first call at the back door. She remembered so distinctly just what she brought—delicious homemade bread, cold meat, and stewed pears. Then should she ever forget that awful time when Freddy had the croup, and the doctor was out of town? How Mrs. Butler watched over him all night and saved his life! Surely there was never any one before so monstrously ungrateful as she had been. She called herself a fool and a wretch, and other hard names.

Mrs. Butler was, of course, meanwhile oblivious of this distress of her neighbour. If she could have but known it, the way would have been clearer. However, she was too enlightened a woman not to know that she was living in disregard of one of the plainest commands of the Scriptures, "Be at peace among yourselves." If there was one thing above another that Mrs. Butler had always prided herself upon, it was that her name was without reproach, absolutely above suspicion. In her secret heart she had flattered herself with the thought that, with such a record, it would be all but impossible for gossips to discuss her beyond the petty questions of how many shirts and towels were accustomed to appear on her lines in the weekly wash, or whether she had company two or three times last week. Consequently, this was no small offence she was called upon to overlook. She tried very hard to make herself believe, when conscience kept up uncomfortable whispers, that she had nothing to do in the matter. She was not the aggressor. She could not thrust pardon upon one who did not want it. So she went on her way, and lived her busy life, engaged in all manner of good works; visited the sick and poor, read her daily portion of Scripture, prayed her daily prayers, attended church regularly, and yet—communion Sabbath she went three seats farther back of where she intended to sit, because her enemy, Mrs. Lane, usually sat in that one. Mrs. Lane was not there, though. She sat at home in gloom and sorrow. And who shall say which was the farthest wrong that day? Truly, "the heart is deceitful above all things." It is pitiful to think that Bible-reading Christians think they commit a sin when they absent themselves from the sacrament, and yet feel privileged to come there with hearts full

of ill-will and bitterness, as if the mere partaking of bread and wine was a sort of enchantment that possessed virtue in itself.

Poor, deluded heart that does not know, will not see, that the same law-giver who said, "Thou shalt not kill," said also, "He that hateth his brother is a murderer." And yet he dares draw near the feast of undying love, and tries to cover the black spots in his heart—the hate and revenge—with the dry leaves of high resolves and long prayers; thinking to cheat God, forgetting that it is written, "The Lord searcheth all hearts and understandeth all the imaginations of the thoughts." How can it be that some of us will be perfectly happy in heaven, for shame of remembering that we once worried and persecuted and hated "some poor handful of dust," and then, unforgetting and unforgetting, counted ourselves among those who love the Lord?

There came a day, though, when Mrs. Butler's complacent spirit was ruffled, and it was brought about through the Concordance. She had taken it down, one Sabbath afternoon, to look out the meaning of a text that occurred in the Sabbath school lesson. As her eye ran over the page to find what she wanted, it fell on the word "forgive." There was a long list of texts with that word in them. Somehow they attracted her, and she ran them over. Some of them seemed new to her. "Forgive, and ye shall be forgiven." Was divine forgiveness conditional in that way? She had never thought of it. Here was another—"If ye forgive not men their trespasses"—What then? She took her Bible and searched it out. Sure enough, it read straight and strong—"When ye stand praying, forgive, if ye have aught against any, that your Father also, which is in heaven, may forgive your trespasses."

Mrs. Butler had read the Scriptures hundreds of times, but it seemed like a new doctrine, for all that. The teaching was plain enough; in order to pray acceptably, she must have a forgiving spirit. More than that, she must actually forgive, otherwise the Father in heaven would not forgive her.

She was not a woman accustomed to have enemies. Her temper, in general, was sweet, and, literally, heretofore, the sun had not gone down upon her wrath. When she put the questions now to herself, as if she had been another person: "Have I forgiven Mrs. Lane? Do I forgive her this minute?" her candid mind was obliged to answer, "No, I have not, I cannot." "But was she not forgiven?" "Was she not a Christian?" "What is a Christian?" "Why, a forgiven sinner." Plainly, according to this word, she was neither one nor the other.

Was this the reason why, of late, God had seemed far off when she prayed?

She entirely forgot the subject she had set out to study, and became fascinated with this one. Running her eye down the long list of "forgives," she came upon—"To whom little is forgiven, the same loveth little." Was this the reason why all relish seemed to have gone from the performance of Christian duty, why her heart was cold as stone? Was the reason one of the links of this strange chain! She loved little, because she forgave not.

These were unwelcome thoughts. Mrs. Butler arose, closed the Bible and Concordance, and made ready to go to the mission Sabbath school. That hour, though, with her Bible, had opened her eyes and quickened her conscience; she lost her self-satisfied spirit, and became as ill at ease as Mrs. Lane. She declared repeatedly to herself, as the conflict went on, that it was entirely out of the question for her to be first to offer to be reconciled; that would destroy every shred of self-respect. It was Mrs. Lane's place to take the first step. When she got to this point in the daily battles she carried on, Satan invariably put in a word: "You would look well crawling after her, trying to make up; as if you couldn't live without her." Then the woman whose soul he coveted would grow hot with indignation, and forget for a time the solemn, awful words, "If ye forgive not, neither will your Father forgive you."

Vainly she tried to compromise matters with, "I will forgive her whenever she asks it." The great difficulty in the way of settling the affair in this way was that uncompromising verse, "When thou stand praying, forgive." She must forgive while she prayed. And then it was a dead-lock! She did not, she could not. "How can I pray without forgiving? and how can I forgive when I do not feel in the least like it?"

And this brought her to the last and only conclusion,—"I must forgive her, or lose my soul." Following quick on that came the resolve, "I will forgive her. I will pray that my feelings toward her may be changed. I will keep on asking that one thing, if it is years before it comes." And in the state of heart she then was, she expected the conflict to be long. Day after day she thought to come with her burden and carry away hardness and bitterness; it seemed so impossible for her feelings to be changed. Ah! little faith had not counted upon the royal kindness and unlimited power of one who promised, "I will give you a right spirit."

No sooner, though, had she come, in true poverty of spirit, and with real desire for this one thing, than lo! the wall was broken down; the bitterness, the anger melted away, like mists before the sun. What was her joyful surprise to find her feelings utterly changed. She had expected, in time, to attain to this state after many struggles; but here the thing was done. She felt that she did from her heart forgive. How had it come about so soon? As if the Lord needed time to bestow a blessing on willing souls! And was this new, strange love for Christ that began to steal into her heart—was this a pledge that He had forgiven her? "Her sins are forgiven for she loved much." Oh, that He would one day say that of her, too!

Mrs. Butler had always been a resolute woman. She had promised herself that not another night should pass before doing all in her power to make peace with her neighbour. She was not one to vow and not perform, or put off the performance. With this purpose in her mind, and meditating on the best way of carrying it out, she stood for a moment on the porch. By this time the full summer moon was up, and the two little homes, tracked away in their shrubbery, looked like abodes of peace.

In the farther corner of the piazza, sitting among the shadows, she could see her neighbour. Mrs. Butler could easily stroll down her own walk, pass through the gate and along the street; but to pause before Mrs. Lane's gate, step in, and pass up the walk, was another thing, and required not a little courage. But she was strong now, with a strength not her own; and although she hesitated just a moment, as she laid her hand on the gate, she had no thought of retreating, for this was to be done for His sake who had forgiven her. The spirit was willing and glad to do it, but remnants of pride put in a suggestion that it would be so much easier if the one who had offended could come to her.

How strange that Mrs. Lane, too, was in the midst of a crisis! She had tried for a whole week to summon courage to go and confess her wrong. This very night she had started three times, but each time had got no farther than the gate; and now sat trembling like a leaf in the wind, feeling as if she never could do it in this world; for she knew Mrs. Butler would give her a look that would nearly cut her in two, and say something sharp, for Mrs. Butler knew how to do that. Leaning her head on her hand, absorbed in her gloomy thoughts, she saw nothing until a slight rustle caused her to look up, and, behold! there was the person she longed and dreaded to meet before her. She had concocted many proper speeches wherewith she would some time meet Mrs. Butler, but not a word of them did she say now. She took the offered hand, burst into tears, and exclaimed:

"Oh Mrs. Butler! Can you ever forgive me?"

Of course, there followed a long talk and mutual explanations; and, as is usually the case when people really desire to heal a quarrel, the causes on both sides for its existence seemed to dwindle into such insignificance that they could only feel shame and astonishment that it had continued so long.

When Mrs. Butler finally heard the climax of the whole thing, how Topknot was safe in the barn this minute, with a large family of her own, and that her mistress had lived through ages of torture all summer because she knew she ought to come and confess, and how much she wanted to, but she was afraid—it began to grow too ludicrous for serious consideration, and she laughed till the tears came.

"You didn't want to any worse than I wanted you to, I assure you," she said, wiping her eyes; then breaking into uncontrollable laughter again.

"It is just as funny as it can be, anyway. It is little wonder, after all, when I come to think it all over, that you did accuse me of such a dark deed when I put poor Topknot over the fence so savagely, and then made such ugly speeches about you."

When they said "good night," the two women parted as lovingly as young girls; and each thought within herself, as they went down the walk together, that the world was never so beautiful as on that particular night.

And now the back gate was unfastened, the grass springing up in the little path was soon crushed, and the two families returned to their former peaceful relations. To insure the continuance of this state of things, Mrs. Lane had a famous hen-park built, so high that even Topknot could not scale it. And duly as the season came around, a pair of her plumpest, yellowest chickens found their way mysteriously to Mrs. Butler's kitchen table—a fair offering on the shrine of peace!

HOW TO OBTAIN LONG LIFE.

Thousands of people annually ruin their constitutions by simply swallowing too much medicine. It may seem a strange thing for a medical man to say, but it is nevertheless a fact. It is a dangerous thing to fly with every little ailment to the medicine chest. The use of tonics, unless under medical advice, should be discontinued; a tonic is sharper than a two-edged sword—it is a tool that needs to be used with caution. There are now, I am sorry to see, some aerated waters coming into use which contain the strongest mineral tonics, that are apt to accumulate in the system with the most disastrous results. They should therefore not be drunk *ad libitum* as to quantity, or without guidance as to quality. Rest should be taken with great regularity. One day in seven should be set apart for the complete rest of both body and mind. Independent of this, all who can afford it should take an annual holiday. Travelling is cheap, and two weeks' or a month's relaxation from care and business cannot make a big hole in the purse of one who works well all the rest of the year and knows how to economize time. Innocent pleasure and wholesome recreation conduce to longevity. All work and no play sends Jack to an early grave. Recreation is to the mind and nervous system what sunshine is to the blood. As a physician, I must be allowed to say just one word about the quieting, calming effect of religion upon the mind. The truly religious make by far and away the best patients, their chances of recovery from serious sickness are greater, and so is their chance of long life, simply owing to the power they have of submitting themselves quietly, yet humbly and *hopefully*, to whatsoever may be before them.

EFFECT OF SUNSHINE.

From an acorn, weighing a few grains, a tree will grow for 100 years or more, not only throwing off many pounds of leaves every year, but itself weighing many tons. If an orange twig is put in a large box of earth, and that earth is weighed when the twig becomes a tree, bearing luscious fruit, there will be very nearly the same amount of earth. From careful experiments made by different scientific men, it is an ascertained fact that a very large part of the growth of a tree is derived from the sun, from the air, and from the water, and a very little from the earth; and notably all vegetation becomes sickly unless it is freely exposed to sunshine. Wood and coal are but condensed sunshine, which contains three important elements equally essential to both vegetation and animal life—magnesia, lime, and iron. It is the iron in the blood which gives it its sparkling red colour and strength. It is the lime in the bones which gives them the durability necessary to bodily vigour, while the magnesia is important to all the tissues.

A PLAYFUL FAMILY—THE SOUTH AMERICAN TAPIR.



YOUNG CANADA.

CHESTNUTS.

Down in the orchard, all the day,
The apples ripened and dropped away;
Tawny, and yellow, and red they fell,
Filling the air with a spicy smell.

There were purple grapes on the alders low,
But the jays had gathered them long ago;
And the merry children had plundered well
Hedge and thicket and hazel dell.

But the sturdy chestnuts over the hill
Guarded their prickly caskets still,
And laughed in scorn at the wind and rain,
Beating the burly limbs in vain.

"Hush!" said the frost; "if you'll hold your breath
Till hill and valley are still as death,
I will whisper a spell that shall open wide
The caskets green where the treasures hide."

Close at the door of each guarded cell
He breathed the words of his wonderful spell
And the bristling lances turned aside
And every portal flew open wide.

Up sprung the wind with a loud "Ho! Ho!"
And scattered the treasures to and fro;
And the children shouted, "Come away!
There is sport in the chestnut woods to-day!"

BORROWING A QUARTER.

Three city boys were on their way home from school, and as there were at least two hours before dark (and before supper time) they were quite ready to stop and look at anything, from a circus to a dog-fight.

"O, boys, just look!" cried Charlie Thorn. "What? where?" exclaimed his companions. They were in front of a second-hand book store; and pointing to a thick, green-covered volume in the window, Charlie exclaimed:

"Why, there's the 'Arabian Nights'—real good, not torn a bit, marked 'Only twenty-five cents!' Full of pictures too!"

"Oh!" said, or rather sighed, Edgar Denny and Will Farnham.

Three faces were pressed close to the bookseller's window, three pairs of eager eyes gazed over the treasure; for to what ten or twelve-year-old is not "The Arabian Nights" a treasure?

Neither Edgar, Charlie nor Will had ever read the wonderful book; but one of the latter's cousins had done so, and had related one or two of the stories to Will, and he in turn had repeated them to his two friends.

"I say," remarked Edgar, doubtfully, "has any fellow got a quarter?"

No fellow had; what was worse, the united wealth of the three "fellows" amounted to just seven cents.

"Perhaps, if I tell papa about it, he'll buy it for us," suggested Charlie.

"Pshaw! Somebody'll snap it up before you can get to your father's store. A bargain like that isn't to be had every day."

"If Tom Baker sees it, he'll buy it, sure pop! He's always got money," sighed Edgar. "If he hadn't been kept in, like as not he'd have bought it before this."

Suddenly Will's face brightened. Putting his hand in his pocket, he drew out a one dollar bill, and announced his intention of buying the book.

"A dollar! Where did you get it?" asked Charlie in amazement.

"Tisn't mine: it's Aunt Mary's. She gave me a dollar this noon and asked me to pay fifty cents that she owed to Mr. Jenkinson, the apothecary, you know. She will not be home till late this evening; and in the meantime I can run up to grandma's and get a quarter she owes me for some eggs I sold her—my little bantam's eggs! Aunt Mary will not mind, if I do borrow a quarter from her for a little while."

So the treasury of marvels passed into Will Farnham's possession, and the three happy boys made immediate arrangements for reading it aloud, turn and turn about. At every street corner they paused to look at "just one more picture," and it was with a violent effort that Will tore himself away to "run up to grandma's."

"But you boys may look at it while I am gone, if you'll bring it to me before supper," he remarked, graciously, as he left them.

Unfortunately he got to his grandmother's just a little while after she had left home for a two days' visit to one of her sons; so the little bantam's eggs could not be paid for then.

"Oh well, it can't be helped now," Will said to himself. "Grandma is certain to give me the quarter in a day or two, and I'll tell Aunt Mary about it as soon as she comes in."

When he got home, his mother told him to put his aunt's change on her bureau and then run to the grocer's and get some sugar for tea. After supper he betook himself to his new book, and was a thousand years and a thousand miles away. He dimly heard some one ask him about Aunt Mary's money, and he gave her a dreamy answer; and his father had to speak to him three times before he realized that it was bed-time.

Of course he for the moment forgot all about the borrowed quarter. Conscious of "good intentions" he felt no anxiety about the matter.

.....
"Isn't it too bad, Will, that our new cook, who makes such nice cake and pie, is not honest, and mamma's got to discharge her?" said his sister Jennie the next morning.

"Yes, it is a pity! What has she taken?"

"Not very much; but, as mamma says, it shows that her principles are not good. She or some fairy (for there was not a person but her in the room from the time you went there until mamma went in and discovered it) took a quarter out of Aunt Mary's room. You put the change on her bureau?"

"Yes, on a little blue mat."

"That was where I saw it," said Mrs. Farnham.

"Then it was lucky for your purse, Aunt Mary," said Will, with a laugh, "that I had borrowed a quarter of you, or you would be fifty cents poorer instead of twenty-five."

"What do you mean? I lent you no quarter!" was the surprised reply.

"No, but I borrowed it."

"Did you, then, lay but one quarter on the bureau?" asked the mother.

"Yes, ma'am. I borrowed the other."

"Oh!" exclaimed Mrs. Farnham, with a

sigh of relief. "Then the cook is not dishonest, and I have unjustly suspected her."

"I am very sorry I did not explain sooner," said Will, earnestly.

"So you ought to be! But suppose you explain now," interposed his father, a little sternly.

And Will told the whole story, adding: "You see, Aunt Mary, I didn't know that grandma was going away, and I thought I could get the money at once."

"Oh, it is all right. You were welcome to the money," answered his aunt.

"I disagree with you, Mary," exclaimed Mr. Farnham, quickly. "I think there is a great principle at stake, and that Will did not do right. There is but one step, one very little step, between borrowing a thing without its owner's permission, and stealing."

"O, papa!" cried Jennie, horrified at the word, "our Will wouldn't steal!"

"I sincerely hope and firmly believe that he would not; but no one can tell what he may do under strong temptation. The clerk who borrows his employer's funds fully intends to restore them. Yet how often we read of a clerk or cashier involving himself beyond recall just by 'borrowing' a few thousands to speculate with. I once knew a gentleman, highly educated and very intelligent, whom I would have trusted with my whole fortune, such implicit confidence did I and all who knew him have in his thorough integrity. He had a few hundred dollars invested in real estate and felt himself honest (as our Will did), and he 'borrowed' a less sum from his employer's funds to invest in some stock that was sure to sell at a high price. Even if he lost all, he knew he could repay it in a day or two, long before his employer needed it. Unluckily, he did not lose. So he 'borrowed' again, and won, and yet again. And so on, until one fine morning the tables turned, and he lost—lost seven thousand dollars!"

"Poor man! what did he do?"

"What could he do? He confessed his dishonesty, but he could not make restitution. So he was sent to the State prison, and died there, overcome with humiliation and contrition. You see, Will, what an honest man may be led into doing, by borrowing another's goods without permission."

"Father, I am very sorry I did it; I felt so sure of being able to pay it at once. But I can understand now why you say there is such a little step between borrowing without leave and stealing. O, mamma, did you accuse cook?"

"No, I only suspected her. I waited to be very sure."

"There it is, Will! You came very near being an innocent cause of great injustice to cook, and of great trouble to your mother. It is easy to commit an apparent trifling fault, but difficult, nay, impossible to foresee what calamities may result from it. 'Abstain from all appearance of evil,' is a good motto for boys, as well as men."

To learn much, we must learn a little at a time, and learn that well.—Locke.

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BAKED QUINCES.—Wash and core ripe quinces, fill with sugar and bake in a baking dish with a little water. May be eaten hot or cold with cream and sugar.

SAUCE FOR GINGER PUDDING.—One cup sugar, half a cup of butter (less will do), two tablespoons of flour, made smooth with cold water, then stir in enough boiling water to make a quart of sauce. Let boil two or three minutes, and flavour with vanilla.

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BOILING CABBAGE.—When you boil cabbage, turnips, onions or any other vegetable that gives out a strong odour, put a piece of charcoal or a red pepper (being careful not to break the skin of it) into the pot with them, and you will find that this is a strong deodorizer.

FROZEN PEACHES.—Pare and divide large, fresh, ripe and juicy peaches, sprinkle over them granulated sugar, freeze them like ice cream for an hour; remove them just before serving, and sprinkle with a little more sugar. Canned peaches and all kinds of berries may be prepared in the same way.

CHOICE FIG CAKE.—Take a large cup of butter and two and a half cups of sugar, and beat well together, one cup of sweet milk, three pints of flour with three teaspoonfuls baking powder, the whites of sixteen eggs, a pound and a quarter of figs well flavoured, and cut in strips like citron; no extra flavouring.

HAMBURG CREAM.—Stir together the rind and juice of two large lemons and one cup of sugar; add the well-beaten yolks of eight eggs; put all in a tin pail and set in a pot of boiling water (if you have no double boiler); stir for three minutes, take from the fire, add the well-beaten whites of the eggs, and serve when cold in custard glasses.

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TOMATO CATSUP.—A lady of taste and experience sends the following receipt: Take four gallons of ripe tomatoes and stew until perfectly soft, then strain through a sieve, and put it on to boil again with three tablespoonfuls of black pepper, three of cloves, three of ginger, three of horse-radish scraped up, four onions chopped fine, three spoonfuls of salt, two quarts of strong vinegar, one pound of sugar—all to be boiled to the consistency of batter and bottled.

GINGER PUDDING.—Two eggs, half a cup of sugar, one cup New Orleans molasses, one tablespoonful butter, one cup warm milk, one teaspoon soda (if sour milk is used, use two large teaspoons of soda), one tablespoon of ginger. Eat with warm sauce. If it is not convenient to bake this at meal time, it may be baked in the morning and heated at noon, or even the next day, by setting it in the oven when dinner is ready. Have the sauce made fresh.

A NICE DISH-CLOTH.—Have about half a yard square, when you have folded it four times, or any other dimensions that may suit you, of mosquito netting, haste it together strongly, and you have a perfect dish-cloth. This is porous and light as a sponge, and can be cleaned with the least labour, and rendered so perfectly sweet that no typhoid shall linger in it. This, with an iron dish-cloth for pots, pans, kettles, etc., will be all that any one will need to have perfectly clean and shining silver, glass or dishes, as far as the cloth goes.

FOOD.—A good complexion never goes with a bad diet. Strong coffee, hot bread and butter, heated grease, highly spiced soups, meats or game, hot drinks, alcoholic liquors, fat meats, are all damaging to its beauty. Strong tea used daily will after a time give the skin the colour and appearance of leather. Coffee affects the skin less, but the nerves more, and a healthy nervous system is necessary to beauty. Late suppers, over-eating at meals, eating between meals, candies, sweetmeats, pastry, preserves, etc., produce pimples and blotches.

DANDELION TEA.—Pull up six or eight dandelion roots, according to size, and cut off the leaves; well wash the roots, and scrape off a little of the skin. Cut them up into pieces and pour on one pint of boiling water. Let them stand all night, then strain through muslin, and the tea is ready for use. It should be quite clear, and the colour of brown sherry. One wine glassful should be taken

at a time. The decoction will not last good for more than two or three days, and therefore it must only be made in small quantities. Good for bile, malaria, and skin diseases.

WATERING PLANTS.—Unless one has an abundant supply of water, so that its use, when once begun, can be continued, it is better, as a general thing, to not water at all. In the drought which we so generally have this month, a mere sprinkling of the leaves is worse than no watering at all. Still, we all may have, in the vegetable as well as in the flower garden, certain plants that we would like to favour. In such cases, instead of watering the plant, the water should be applied to the soil; draw the earth away from the plants, forming a sort of basin around them; then pour on water gradually, and let it soak in around the roots. Afterwards return the removed dry earth to its place, and this will act as a mulch to keep the roots moist.—*American Agriculturalist for July.*

A SAND BAG.—One of the most convenient articles to be used in a sick-room is a sand bag. Get some clean, fine sand, dry it thoroughly in a kettle on the stove, make a bag about eight inches square of flannel, fill it with the dry sand, sew the opening carefully together, and cover the bag with cotton or linen cloth. This will prevent the sand from sifting out, and will also enable you to heat the bag quickly by placing it in the oven, or even on the top of the stove. After once using this you will never again attempt to warm the feet or hands of a sick person with a bottle of hot water or a brick. The sand holds the heat a long time; and the bag can be tucked up to the back without hurting the invalid. It is a good plan to make two or three of the bags and keep them ready for use.—*N. Y. Evening Post.*

CARE OF GRINDSTONES.—The following rules should be observed in the care of grindstones: 1. Don't waste the stone running it in water, nor allow it to stand in water when not in use, as this will cause a soft place, and consequent uneven wear. 2. Wet the stone by dropping water on it from a pot suspended above the stone, and stop off the water when not in use. 3. Do not allow the stone to get out of round, but true up with a piece of gaspipe or "hacker." 4. Do not leave the stone out of doors in the wind and weather, as this hardens it and makes it less effective. 5. Clean off all greasy tools before grinding, as grease or oil destroys the grit. 6. When you get a stone that suits your purposes, keep a sample of the grit to send to the dealer to select by, as in this way you can always secure one that suits.—*Mechanical Journal.*

DARNING STOCKINGS.—The most convenient way of mending is to have an india-rubber ball to put into the stocking to darn over. It is much better than a wooden ball, as it is lighter to hold, and being elastic yields a little. Slip it into the heel or toe; gather the foot into the left hand, so as to keep the work smooth over the ball; then have the darning-needle threaded with yarn as near the colour of the stocking as possible; run the needle lengthwise, passing the threads into the knitting, so as to keep it firm—this is like the warp of cloth; then go across, taking up alternate threads of the warp, put up one and leave one; when you return, pick up those left, and skip the others, and so on till the place is filled. This makes a nice flat darn, and will last as long as new cloth. Darning stockings is one of the best opportunities to exhibit nice needle-work and handicraft with a needle, and what is worth doing at all is worth doing well. It pays to line stocking heels with fine soft cloth, as they wear much longer; but never patch stockings.

COCONUT JELLY CAKE.—*Chocolate, Lemon, or Orange.*—The following, in response to the inquiry for a good recipe, is sent us by a lady of this city: "Two cups of granulated sugar, one-half cup of sweet milk or water, four eggs, two tablespoonfuls of butter, two cups of flour, one teaspoon even full of soda, two even full of cream of tartar, a little salt; heat the whites and yolks separately; bake in three or four tins, according to the size. To obtain the filling for the cake, pour four tablespoonfuls of water on one cup of granulated sugar, and let it boil; beat the whites of three eggs well, and while the sugar is boiling hot, pour it on the whites, stirring all the time; then add the coconut, and put between each cake and on the top, adding a little more coconut on the top to make it look like snow." She further says: "If your lady correspondent has as good luck with this recipe as I have, she will never ask for another, as she will want nothing better. I think it very nice for us women to have a small space in your good paper for exchange of recipes. It is what we need—not extravagant recipes, but such as come within our means and are good."

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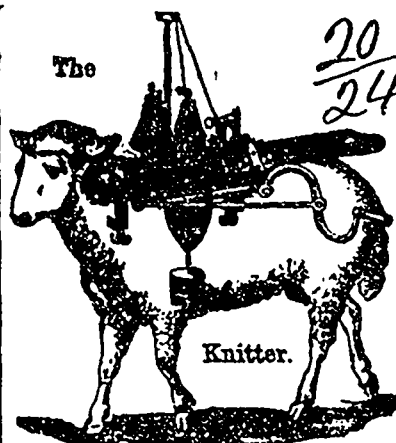
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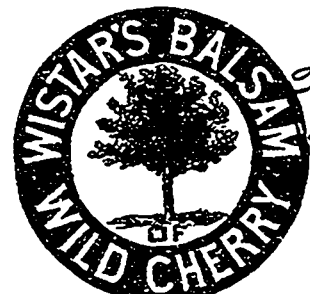
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TORONTO WHOLESALE MARKETS.

OFFICE RURAL CANADIAN, Toronto, Oct. 14th, 1882.

The fall trade seems to have set in, and promises to be a good one. The crop has begun to offer, and both holders and buyers seem to desire quick sales and early shipments, which is certainly good policy for both; while, to back this, prices of produce have been maintained quite as well as could have been expected in view of the state of outside markets.

CATTLE.—Receipts have been large and prices rather easier. Choice steers for export, that is to say, averaging not less than 1,300 lbs., were not offered, but were wanted at \$5.00 to \$5.50; good second class steers stood about \$4.50 to \$4.75, and inferior to medium from \$3.00 to \$4.25. Sheep—Scarce and wanted at \$5.00 for export, and at \$4.50 to \$4.75 for butchers' lots. Lambs—Abundant and ranging from \$3.25 to \$3.50, with a few choice going as high as \$3.75 to \$4.00. Calves—Scarce and usually sold at \$6.00 to \$8.00 each.

FLOUR.—Stocks 2,500 bushels, against 1,497 in the preceding week, and 625 last year. All offered has been wanted, and prices have recovered somewhat during the week. Superior extra sold on Thursday last at equal to \$4.70 and \$4.75 here, but subsequently went off daily at equal to \$4.80, and closed with sales at this price yesterday. Other grades inactive; the only movement reported being sales of extra yesterday at equal to \$4.70. Bran, firmer and sold at \$12.50. Oatmeal, cars not offered and prices nominal, with small lots easier at \$5.50 to \$5.75.

HIDES AND SKINS.—There has been no change in green hides which have been in fair supply. Cured have sold at 9 1/2 c. for heavy weights, and cars of average offered at 9 3/4 c. Calfskins—None offered and prices nominally unchanged. Sheepskins—Prices unchanged at last week's advance, green going at 95c. to \$1.00, and country lots at 60c. to 90c.

PROVISIONS.—Fairly active, with stocks of meat run very low. Butter was in demand for shipment up to the end of last week when sales were made at from 16c. to 17c.; the latter for good lots with white thrown out. Choice dairy for local use scarce and firm at 18c. to 20c., and inferior quiet at about 13c. Cheese, unchanged at 11 1/2 c. to 12c. for small lots of fine; skim nominal. Eggs, all offered have been wanted and readily taken at 20c. for round lots. Pork has again advanced; small lots have brought \$26 with scarcely any held at the close. Bacon, long-clear has sold in round lots at 13 1/2 c. and in small parcels at 14c., and Cumberland in small lots at 13c. but stocks are now almost exhausted and the little on hand held very firmly. Hams, in approved demand, with sales of round lots at 12c. and 15 1/4 c. and small lots at 15 1/2 c. Lard, there is scarcely any on hand and the little held has sold at 15 1/4 c. to 16c. for small lots.

WOOL.—Fleece inactive, being neither offered nor wanted, and nominal at 18c. to 20c. Super steady and sold to dealers at 27c.; extra scarce and wanted at 33c. with large sales of pulled and imported to factories at steady prices.

GRAIN.—Stocks in store, 28,157 bushels of fall wheat; 5,463 of spring; 200 of oats; 61,658 of barley. 4,371 of peas, and 6,284 of rye. Receipts generally have been increasing, and the demand fairly active at rather firmer prices. Wheat—Fall has been wanted for shipment; No. 2 opened last week at 98c., and No. 3 at 94c., but the former sold freely on Tuesday at 99c. to \$1, and the latter brought 95c. f. o. c. Spring, quiet and less firm than fall, with shippers not inclined to pay any more for it; No. 2, however, brought \$1.02 last week, and No. 3 sold at 97c. on Tuesday. The market closed easier with 99 1/2, the best bid for No. 2 fall, and nothing doing in spring, value of which seemed nominally unchanged. Oats have been very scarce, and wanted at an advance; cars to arrive sold last week at 41 1/2 c., and at 41c. on Monday; but on Tuesday 43c. was paid on track, and yesterday 44c. delivered. Barley has been in good demand at prices generally steady. No. 1 very scarce, but brought 82c. last week; No. 2 sold last week at 75c. and 76c., and on Tuesday at 76c.; extra No. 3 sold at 68c. last week, but brought 69c. on Monday and Tuesday; No. 3 went off last week at 58c., but on Tuesday brought 60c. The market at the close was weak; a cargo of extra No. 3 sold for 65c. at a lake-port, and cars on spot at 61c. f. o. c.; for No. 2 there was 76c. bid, and 81c. for No. 1. Peas—Two lots of No. 2 were offered yesterday at 80c., with 72c. bid. Street receipts very small, and 77c. paid. Rye—Cars offered at 65c., and sales on street at 65c. to 66c.

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