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THE RURAL CANADIAN.

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

Vol. VIII., No. 11.
Vol. IV., No. 11—New Series.

Toronto, November, 1885.

\$1.00 per annum, in advance.

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INCORPORATED A.D., 1855. *2/3*

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ONLY WEIGHS 6 LBS. Can be carried in a small valise.

Pat. Aug. 2, 1884. G. W. Dennis, Toronto.

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C. W. DENNIS, TORONTO BARGAIN HOUSE,

213 Yonge Street, Toronto.

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Our Family Knitting Machine.



Send for descriptive catalogue and testimonials from the blind. Creelman Bros., Georgetown, Ont.

Under-shirts, Drawers, Scarfs, Children's Wear, Hosiery, Caps, Gloves, Mitts, etc., all sizes, can be made on OUR FAMILY MACHINE. Our Book of Illustrations will teach you all simple, six needle work. It can be made in one day, giving a profit of 75 cents each. Blind girls can knit and finish one doz. pairs of socks per day, and \$2.50 and \$4 per day can be easily made on our GREAT FAMILY CANADIAN KIRKING MACHINE.



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Are generally induced by indigestion, foul stomach, costiveness, deficient circulation, or some derangement of the liver and digestive system. Sufferers will find relief by the use of

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to stimulate the stomach and produce a regular daily movement of the bowels. By their action on these organs, AYER'S PILLS divert the blood from the brain, and relieve and cure all forms of Congestive and Nervous Headache, Bilious Headache, and Sick Headache; and by keeping the bowels free, and preserving the system in a healthful condition, they insure immunity from future attacks. Try

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Dr. J. C. Ayer & Co., Lowell, Mass

Sold by all Druggists.

Highly Commended at the Toronto Exhibition, 1883.



Is quickly and easily attached to the head of Cattle, Hog, etc., and retained there by Steel Springs; as a result, it is instantaneously and painlessly deprives the animal of sensibility.

The "Stunner" is the only instrument that can be attached to the head of Stock for Slaughtering purposes. It enables the FARMER and PIG-KEEPER to kill his own Cattle and Hogs humanely, safely, speedily and quickly.

Humanitarians should use and advocate the use of the "Stunner."

A sample sent, Carriage paid, for 75 cents.

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ASK YOUR GROCER FOR IT!

NATIONAL PILLS are unsurpassed as a safe, mild, yet thorough, purgative, acting upon the bilious organs promptly and effectually.

WHAT IS CATARRH?

[From the Toronto (Canada) "Mail"]

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

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

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

A New Treatment

FOR THE RAPID AND PERMANENT CURE OF CATARRH

A. H. DIXON & SON

NO 305 KING ST. WEST. TORONTO-CANADA.

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

Messrs. A. H. DIXON & SON:

Dear Sirs,—Yours of the 19th inst. to hand. It seems almost too good to be true that I am cured of Catarrh, but I know that I am. I have had no return of the disease and never felt better in my life. I have tried so many things for catarrh, suffered so much and for so many years, that it is hard for me to realize that I am really better.

I consider that mine was a very bad case. It was aggravated and chronic, involving the throat as well as the nasal passages, and I thought I would require the three treatments, but feel fully cured by the two sent me, and I am thankful that I was ever induced to send to you.

You are at liberty to use this letter, stating that I have been cured at two treatments, and I shall gladly recommend your remedy to some of my friends who are sufferers.

Yours, with many thanks,

Rev. E. B. STEVENSON.

Rural Canadian and Farm Journal,

WITH WHICH IS INCORPORATED

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Vol. VIII., No. 11.
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RURAL NOTES.

HALF hardy shrubs may be protected against the severe cold of winter by surrounding them with evergreen boughs. To bind them up closely involves risk; they should always have about them a circulation of air.

Put harvest implements under cover, and give their iron-work a coat of oil. Don't leave the plough in the furrow when the work of the season ends. Get stables ready for early housing of farm animals. See that roots are well secured before the first hard frost comes.

A VETERINARY surgeon has been appointed by Hon. John Carling, Minister of Agriculture at Ottawa, to proceed to Essex and quarantine every farm on which there has been an outbreak of hog cholera. This work was attended to in part a few weeks ago; but the disease still continues to spread.

THERE are complaints of rot in the potato crop this year, especially from the country bordering on the shore of Lake Ontario. The rainy weather of August and November no doubt contributed to the spread of the disease, if, indeed, it was not the cause. On high lands five or six miles back from the lake no injury seems to have been done.

Young boys of the farm are often found to be more fond of the society of the hired man than that of their parents; so also as regards young girls and the domestic servant. For this reason the heads of families cannot be too careful as to the character of the persons they employ. An idle, dissolute or profane servant is a dangerous inmate of any household.

In putting up roots for market the best plan is to pack them solidly in headed barrels, ventilation being provided for by boring augur holes in the sides. Potatoes should not be put up until they have had the preliminary sweat. They should be clean, and of uniform size. Turnips do not require such careful handling, but the smoother they are, and the more uniform as to size, the better they will sell.

The long evenings can nowhere be so profitably spent as on the farm, giving a taste for reading and study. Many a young farmer or son of a farmer has a chance to improve his mind during the next six months, if only he will apply himself diligently and systematically. One or two good books on grain-growing, or live stock, or fruit-culture, well studied during the winter evenings cannot fail to tell on the results of work in all future years.

For dairy farming a few simple rules only are necessary. Select cows that give promise of being good milkers. Breed them to a bull of full blood, for a bull is half the herd. Feed liberally, for in so doing your cows will feed you and feed the land also. Provide warm shelter and a plentiful supply of water. Treat your cows kindly; feed and milk them regularly; keep their stables clean and well ventilated; and trust them to make a liberal return.

We have this year had a series of tests for butter and cheese conducted at the Provincial and Industrial Exhibitions, and cattle men have been greatly interested in the results. It is a very good idea, and the lessons may prove to be profitable as well as instructive. But dairymen risk a good deal in making such tests. There is danger of the cows being subjected to too great a strain, with possibly fatal effects. An American exchange notices the death of two fine animals recently as a result of those tests.

THE destruction of the barn and cattle stables of the Model Farm by fire is, fortunately, not a very serious matter. Only one first-class animal was lost, for it happened that almost the entire herd of thoroughbreds was on exhibition at the time. Had the fire occurred at almost any other season of the year the loss would have been very heavy; and this suggests the propriety of some measure of precaution being taken for the future. A night watchman should be on duty at the Model Farm stables.

THE Fat Stock Fair at Chicago this year is to be followed up by a National Convention, to be held in the interest of cattle owners generally. It is intended at this convention to discuss the cattle trade in all its relations; and, in addition to addresses and papers by several well known men, special subjects will be considered by committees to whom they have already been referred. This convention ought not to pass unnoticed in Ontario, and we hope to see the Province represented at it.

We should suggest to the readers of RURAL that early steps be taken to establish Farmers' Institutes in the various electoral districts of the Province. An appropriation was voted for this object by the Local Legislature last session, and the Commissioner of Agriculture was authorized to make a grant of \$25 to any Institute established in an electoral district where a similar grant has been provided by the County Council. In order to be ready for the holding of winter meetings, it is important that the Institutes should be organized as soon as possible.

CORN-HUSKING is work that will be carried on throughout this month in the corn-growing districts. It is a good time for selecting corn for next year's seed, and care should be taken to pick out the largest and best filled ears. As a rule these are the earliest, and corn that matures early, and that yields the largest quantity of perfect seed to the ear, is the most likely to produce a crop of its kind. A dry and moderately warm place is the most suitable for winter-keeping; in a moist atmosphere, and exposed to extremes of cold in winter, the vitality of the seed is apt to be destroyed.

MR. FULLER, of the Oaklands Dairy, manages his fine herd of Jersey cows like a thorough business man. The cows are milked at a stated hour, morning and evening, and each cow's yield of milk is weighed and an entry of it made in a book. Strict accuracy is required of every attendant; no one is allowed to trust his memory for a figure, but the entry for each cow must be

made as soon as she is milked. Tests are also made from time to time of the quantity of cheese and butter each cow's milk will produce, and in this way the value of each animal of the herd is carefully determined.

It is not wise to rush to extremes. Because a crop fails one year we should not abandon it the next, nor even reduce the area. But that is just what many people will do; and next year the crop may turn out to be a good one, and it is almost certain to bring a better price. The simple fact that it is a failure this year will alone serve to make the demand for it more active. We have this year been unfortunate with spring wheat, and following the usual rule farmers are likely to sow less next year. But there is no reason to expect that another summer will turn out to be like the past one. There are no two seasons alike; and, unless there is good reason for believing that the demand for an article is permanently declining, it is, nine times out of ten, a mistake to abandon its production.

PEAR-BLIGHT has been made a subject of special study this year by Dr. Starbuck of the New York Experiment Station. The doctor has proved to his own satisfaction that the disease is due to living germs; that these germs can live and multiply in any damp spot where there is decomposing vegetable matter; that from such places they are raised into the air when dry, or may be carried up by moisture; that from the air they lodge upon the trees, and when the conditions are favourable they pass into the tissues and cause the blight. He has observed, as a rule, that the germs usually enter a tree through the tender tissues, such as are found in the blossoms and at the tips of expanding shoots, and so they pass down into the body of the tree. For preventive, he advises that trees be not forced into too rapid growth, and for remedy he recommends that every affected branch be cut off a foot below the lowest spot where the disease shows and then burned.

Why is it that so few of our farmers think to make butter in winter instead of summer? Just consider it: In summer they are busy with seeding and harvesting of crops, and milking and churning take up time that would be better spent in rest. Good butter cannot be made without care. The milk needs to be kept at a certain temperature in order to get the largest quantity and the best quality of cream; and all the operations of churning, curing and packing must be carried on with extreme nicety, if first-class butter is to be turned out. We all know, however, that first-class butter is the exception rather than the rule of the summer dairy, and that between low prices and the "pesky" fly, the farmer has cause enough for vexation of spirit. But suppose that cows come in about the middle of September. They are in good condition after the summer's rest. There are no flies to disturb them. There is no need of ice to cool the milk or preserve the butter. The late pastures, followed with a good supply of hay and roots, will keep up the milk flow. The farmer will find time for every detail from milking to marketing. Better butter will be made, and better prices got for it. And work on the farm will be more equally distributed.

FARM AND FIELD.

FOR THE RURAL CANADIAN

WALKS AND TALKS AMONG THE
FARMERS—NO XVIII

APROPPOS of orchard starvation, spoken of in my last paper, I have, since it was written, "come across" an old farmer, who told me he had serious thoughts of grubbing out his apple-trees because they bore little or no fruit. A crop of potatoes planted close up to the trees occupied the ground at the time of our conversation. Like many more of his class, he was unreasonable enough to expect two crops from his orchard ground, without giving it any manure. I reasoned the matter with him, strongly urging that the apple-trees needed all the goodness of the soil, which, through over-cropping, was poverty-stricken. I assured him that if he would give his orchard a liberal dose of manure, he would cure its barrenness. He listened with astonishment, as though some new and strange revelation were being made to him. Will he receive it as such and act upon it, or conclude that some unaccountable blight or curse of unfruitfulness has fallen on his trees? "It is hard to teach old dogs new tricks," and of all dull scholars, an old farmer, "stiff sot" in his ways, is the hardest to convince. But surely we may hope for better things from "the young and rising generation" as it is called.

My old farmer friend seemed particularly incredulous when I told him orchards ought not to be ploughed. As it is possible some of the readers of THE RURAL CANADIAN may be afflicted with a similar incredulity, let me here explain why it is not advisable to plough orchards. Every tree sends out a system of coronal roots just beneath the surface of the soil, which will again throw out branch rootlets in a horizontal direction, and these all continue to multiply until the surface of the ground is covered with a close net-work of fibres, having open, hungry mouths ready to drink in the supplies of nourishment that are dissolved by fall-ingeowers. These are the feeders of the stem and branches. To mutilate or destroy them cannot but lessen the vigour of the tree. The plough tears this fibrous net-work of rootlets to pieces, and makes terrible havoc among them. All vegetation should be kept down around fruit-trees as far from the trunk as the extremity of the largest branches, by hoeing the surface over frequently, or by applying a few inches of mulch. "What is mulch?" I have often been asked when I have employed that word. It is well-rotted manure, chip-dirt or any kind of rubbish spread on the surface of the ground. It is used for the double purpose of keeping down vegetable growth, and supplying manure to the roots of trees. I do not deny that fruit-trees may bear something of a crop in spite of orchards being ploughed and the net-work of roots badly torn and mutilated; but I am quite sure the crop would have been finer and more abundant if the roots had not been disturbed and devastated.

I was walking with a farmer not long since in his orchard, and he was bemoaning the unpromising condition of the trees. It was a young orchard, but old enough to bear moderately. Some of the trees were thrifty, vigorous and fruitful; but the majority of them were in a bad way—dead, dying, diseased, or weak-looking. As usual, the climate was blamed, and exclamations were indulged in as to its being strange that the orchard was not doing better; but, on closer inspection, some of the causes of unthriftiness were apparent enough. In a few cases tender varieties, like the Rhode Island Greening, had succumbed to severe cold. Here and there, the

entire side of a tree had been blasted by the ravages of the tent caterpillar. But the worst trouble had been the work of the borer. Some of the trees plainly showed the marks of this marauder all up their trunks as far as the first crotch, and even higher up. Other trees that had a sickly look were found to be girdled by the borer at the surface of the ground. All the mischief in that orchard might have been prevented by timely precaution. Even the destruction of tender kinds might have been averted by shelter or protection of some sort. The owner felt himself the victim of misfortune. In reality, he was the victim of his own ignorance.

ORCHARD management is quite a science. Planting a tree is the smallest part of the business, though even that may be either well or ill done. A tree may be rammed into the ground like a post, or set with care, the roots and fibres duly spread out, so as to have every chance of growing. Much of the success of a tree depends on the manner of its planting. But, planted ever so well, the after-culture is a matter of the greatest importance: Pruning with knife, thumb and finger, to get it into shape; keeping the soil well stirred around the base, watching against insect enemies, and the bestowal of many little attentions are necessary. "Eternal vigilance is the price of" fruit, as well as of "liberty." The great mistake is that of undertaking things in ignorance of the requisites to success. To succeed in any business we must understand it. What is the use of planting a tree if we do not know to take care of it, and will not be at the trouble to learn?

The world teems with books on orchard management, and on every other department of husbandry. Is it wise to spend a lot of money on buying trees and planting an orchard, when a dollar is begrudged for some useful work on fruit-culture? The prejudice against book-farming seldom voices itself nowadays; but it may be seen plainly enough in the scarcity of good books on agriculture and horticulture in farmers' houses. It is the minority still who take a rural paper. "Read and you will know" is as true about farming and gardening as any other department of human knowledge. The accumulated wisdom of ages on all subjects is embodied in good books and scattered broadcast in useful periodicals. If a man shuts and bars his doors against these, he metaphorically closes his windows to the light of day, and must sit or walk in darkness.

The time of year is upon us which is most of all favourable for reading. Long evenings and comfortable firesides invite to study. Ask yourself, my friend, in what branch or branches of farming you have the greatest need of information. Get books on those subjects, and master their contents. "Reading makes a full man," and you cannot be too full of useful knowledge. Do not say you cannot afford to buy a few books or subscribe for agricultural papers. The fact is, you cannot afford to be without them. In this day and age of keen competition, ignorance must go to the wall. The time is past for mere muscle to win in the race of progress. Farmers now must be scholars, machinists, chemists, entomologists, physiologists, if they are to achieve distinguished success. Untutored minds could fell the forest trees, and scratch grain into a virgin soil, but intelligence only can reclaim impoverished land, drain wet fields, manage modern implements and raise fine fruit.

There are other means of acquiring useful knowledge open to those who are willing to avail

themselves of them, such as Farmers' Clubs, Granges, Farmers' Institutes, Dairy Conventions, Fruit-Growers' Associations, and so on. Let none of these opportunities of self-improvement be neglected. If there is no farmers' organization in your neighbourhood, make a stir, and get one established. A fortnightly or monthly meeting held throughout the coming winter would be a most valuable school for men too old to go to an agricultural college, as well as for the boys who cannot get there. In this connection, let me suggest to the directors of agricultural societies that, if they would enliven their annual meetings by having some addresses and discussions on practical farming, they might secure a larger attendance on those occasions, and stimulate improvement in their several localities. There is no good reason why these meetings should be wholly occupied with routine business which can be put through in half-an-hour, and in which, unfortunately, but few take an interest.

W. F. O.

SCALES ON THE FARM.

There are many farmers who do not properly estimate the value of being able to weigh upon the farm what may be produced thereon, especially that portion to be sold. The dealer in stock, who comes to your farm to buy, is estimating and weighing daily, and becomes so expert that he can guess the weight of an animal within a few pounds. The majority of farmers cannot do this. The dealer is going to buy as cheap as he can. He asks the farmer his price. The reply is often made that he does not know what it is really worth; what will he pay for it. The reply is, he cannot buy and sell; you must set the price. If the farmer is really ignorant of its value the dealer soon discovers it, and acts accordingly.

Last fall I bought a flock of sheep to raise early lambs. Not having kept sheep for years, I was not posted; but I raised some fine lambs. Some buyers were looking at them, and I priced them for the whole lot; this was claimed to be too high. A few days later the sheep were yarded to be shorn, when a number of the lambs was weighed. The next day one of the village butchers met me and said he was just coming to see me about those lambs. I told him to go and look them over, he spent an hour among them. "You found some fine lambs?" "Oh, fair," he replied. "The first lamb dropped was on March 20th, the majority after the first of April. Now, in view of their age, are they not more than fair?" He admitted that, for their age, they were very good. I asked him what some of the best of them would weigh. "Oh, about forty-five pounds," he replied. I smiled, and asked him if he did not know any better, remarking that it was useless to beat around the bush, as I was posted on their weight, and that seventy was nearer the mark than forty-five. I set my price and he bought them.

The next day I met another of the village butchers and told him that I had a wether, and that, as I only wanted to keep ewes, I would sell it. I told him \$5 was the price, in answer to his inquiry. He said he would give \$3.50, if a good one, but \$5 was out of the question. He said he would give four cents per pound (four and a half is the market price). At his figures the sheep was worth \$4.80, at the market price \$5.40.

This spring, in selling some grain, I weighed the last load. The weight at the warehouse and my weight did not agree; I showed my figures; they looked again, and found a mistake. It paid me well for weighing.—*Germantown Telegraph.*

The average annual yield of wheat in France is sixteen bushels per acre.

RENNIE'S DITCHING MACHINE.

UNDERDRAINING.

The practice of underdraining has received considerable attention during late years, and is no longer an experiment. The fact has been proved beyond question that nearly all our land requires more or less underdraining to ensure good crops. The advantages are so numerous that all cannot be mentioned here. On underdrained land seeding can be done much earlier in the spring, and the soil is in much better condition for receiving the seed than on land which has not been underdrained. The seed would germinate well, and the plants when once started would be healthy and continue to grow whether the season be wet or dry. On land which has not been underdrained, and more especially clay soils, the grain would perish in a wet season, and in a dry season the surface will "cake" so hard as to prevent many of the plants from making their appearance. When the stronger growing cereals fail to germinate, is it a wonder

cured, a covering of straw before filling in the earth is advised. The size of tiles for lateral drains should not be less than two and a half inches, while for the main drains, the farmer must be governed by the quantity of water to be carried off. Either four, five, or six inch tile will usually answer. The cost of underdraining clay soils is about as follows:

Cost of tiles \$15 to \$17 per acre, including the mains, and the cost of digging the ditches with one of Rennie's Ditching Machines (see illustration), which are becoming so popular, is \$3 per acre, making a total of less than \$20 per acre. In localities where it is difficult to procure tiles, wood can be used to good advantage by nailing two pieces, say five inches by one and-a-quarter, thus A. This method of draining is cheaper than tiles, and will last forty to fifty years, provided the ten or fifteen feet nearest to the opening of the drain are built of stone, brick or tiles, as wood will decay soon when exposed to the air.

There is certainly no investment that can be made on a farm which will bring better or surer returns than a complete system of underdraining.

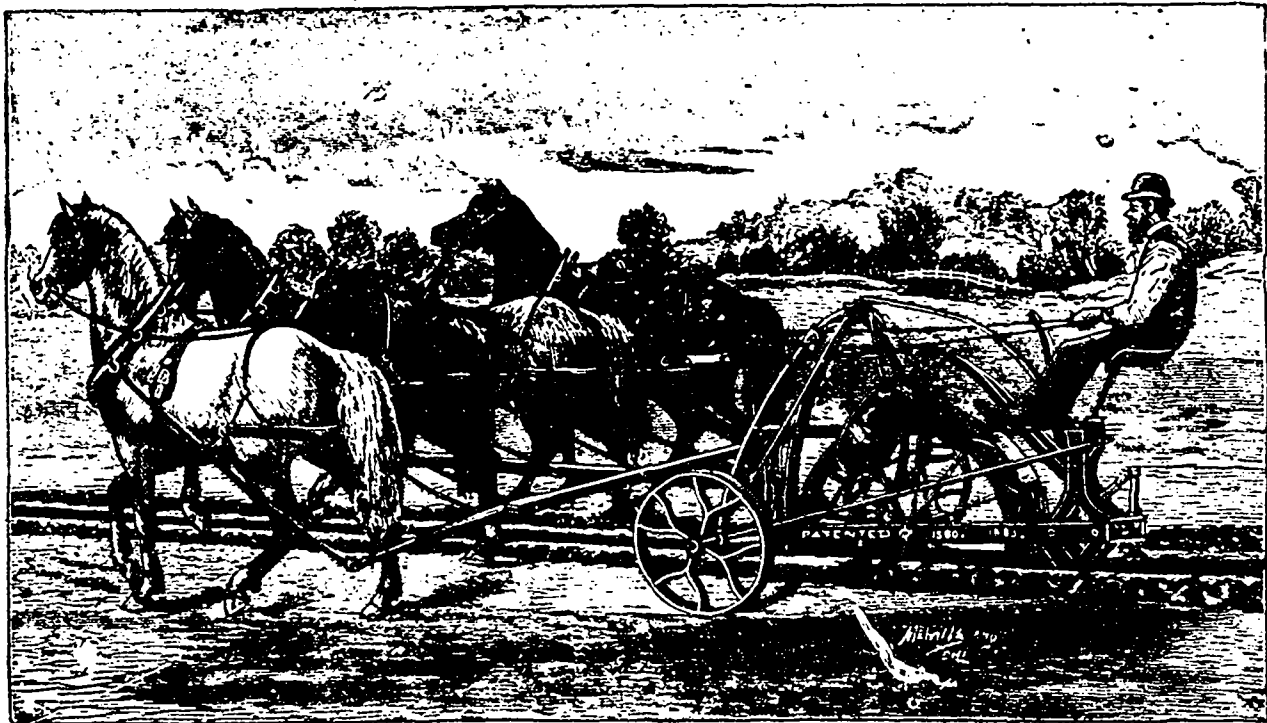
HOUSEHOLD HINTS.

WATER which has stood in an open dish overnight should not be used for cooking or drinking, as it will have absorbed many foul gases.

A DELICIOUS cream is made by this recipe: Mix some raspberry jam or jelly (a small cupful) with one pint of cream, and strain it into a bowl. Dissolve half an ounce of gelatine in a very little hot water, and, when just warm, stir it into the cream. Pour the mixture into a mould, set it on ice, and serve when very cold.

THERE being so much fraud and chicanery in the matter of baking powders at the present time, it is very important that a simple test be available to test occasionally. Balance two samples on the scales, carefully weigh a small glass of water, pour into one until all effervescence ceases; the loss in weight, less the water added, will give the proportion of carbonic acid gas, the active principle in all baking powder, the sample contained.

AN economical dish is made as follows: Wash a calf's liver; remove the skin and cut off the



RENNIE'S DITCHING MACHINE.

that the weaker clover and grass seeds, which are usually sown at the same time in the hope of getting a "catch," should not grow? Thorough underdraining prevents surface water from standing on the soil in wet seasons, and in dry seasons counteracts the tendency of clay soils to "cake." The saving of horse-flesh in ploughing and otherwise working the soil on underdrained land is considerable, as it is usually mellow and loose. The land can also be ploughed in broad ridges with very few furrows, which is a decided advantage in harvesting with either the reaper or mower.

The number and depth of the drains depend largely upon the nature of the land: In stiff clay soils the drains should be about thirty feet apart and from two and-a-half to three feet deep; in loamy soils, forty feet apart and three feet deep. Before commencing to underdrain, every farmer should make a diagram of his farm (drawn to a scale), and mark every drain, so that he or his successors can locate them at any time in case of a stoppage. It is preferable, when possible, to run the lateral drains parallel and with the fall of the land. It is not considered an advantage to run across a piece of rising ground, for while the drain will draw farther from the upper side, it will draw so much less from the lower side. Tiles are unquestionably the best material for drains. In quicksands, collars should be used to break the joints, but where these cannot be pre-

Low, wet lands can be changed from a condition of unproductiveness to the highest state of fertility, and in certain seasons the entire outlay for underdraining will be recovered.

THE *Farmers' Gazette*, of Dublin, says: "Reports to hand from all the principal hop-growing districts of Kent and Sussex represent the condition of the hop plantations as most unsatisfactory."

THE English potato crop is considered a failure. France is expecting a short crop of wheat, while accounts of Southern Russia show little to spare in that quarter. The rye crop of Russia, Germany and Austria is considerably damaged, all of which is favourable to better prices in this country.

TOP-DRESSING of fall wheat is work that may be done any time before the snow falls. The only precaution required is to use fine or well composted manure, and to spread it evenly over the surface. Coarse manure can only be used to any advantage when it is thoroughly shaken to pieces, as the effect of any lump of it would be to smother the young plants. The composted manure is speedily carried into the soil by rains, and is a source of immediate nourishment. Besides, the labour is greatly simplified now, for the manure-spreading machine does the work very satisfactorily—breaking up all lumps and scattering the manure thinly and evenly over the field.

white fat from the under side. Lard the upper side with fat salt pork. Brown in a baking pan two tablespoonfuls of flour in hot butter or dripping; place the liver in the pan and let it brown on both sides. Add one carrot cut in halves, one onion in which six cloves have been stuck, one bay-leaf and the rind of a lemon. Pour three cupfuls of water or broth in the pan and bake for half an hour, basting often. Then add one teaspoonful of vinegar and one of lemon juice and salt and pepper; baste two or three times. Strain the gravy over the liver, garnish with round slices of lemon and serve.

New and pretty house aprons to wear at high teas and the like over rich toilettes made short, are "Roman" in effect on the skirt part, and are embroidered with an edge in rich oriental colours in Roman designs. The novel feature of the apron consists of there being added a sleeveless zouave jacket, but cut away still more than even these diminutive jackets usually are. The back of the jacket reaches several inches below the waist, and joins the apron on the side seam. A rich bordering of the embroidery also finishes the zouave portion, and cream-white canvass or etamine is the chosen fabric. The garnitures are varied to suit different tastes, but arrasene is a favourite decoration. Pockets at each side are added, and butterfly bows of satin ribbon are set upon the shoulders.

HORSES AND CATTLE.

FEEDING AND MANAGEMENT OF HORSES.

The feeding of horses is no unimportant matter. The farmer who gives his horses a certain number of quarts of oats or corn two or three times a day and keeps a well filled hay rack in each stall, knows absolutely nothing of feeding horses. Good, sweet hay, and bright, plump oats may be the very best food for horses; but the sameness of the best diet operates injuriously upon any stock, and more especially upon horses. The most generous feeders are not always the best. I do not like to see hay always in front of a horse. In the matter of feeding hay, the rack should be placed so that the horse can reach for hay without any exertion, and while in a standing position. But a small quantity of hay should be given at one time, and when that is consumed, if the horse requires more, the manger and rack should be replenished. The reason why it is deemed advisable to feed hay in small rations is that, although it is more trouble to feed so often, yet by such frequent feeding the horses are not compelled to eat stale hay. When sufficient hay is given in the morning to last all day, as is the practice of some farmers, the hay soon gets fouled and the horse loses his appetite for it.

A horse will eat better and thrive faster if his food is always fresh, and the only way to insure this result is by feeding in small rations. The horse will keep in good spirits and retain his appetite much better if only fed in small quantities, and no more than he can readily consume while fresh. Hay containing weeds or that has become musty or mow-burnt, should not be fed to horses for the reason that it will not be consumed with relish.

The common method of feeding horses is objectionable in some respects. I refer to the racks in front of the stall, elevated above the horse's head, that are generally used for feeding hay. This method of feeding is the cause of the horse's head and neck being always dirty, and is an unnatural way for the horse to feed. A much better way of feeding is to place the hay in the manger. I had a young horse once that seemed to be weak in his fore-legs. By the advice of an old horseman I commenced feeding him hay on the floor of his stall, and with such good results, that in this individual case I still continue the practice. The best way of feeding hay, however, is an open manger.

In the matter of grain, oats may be said to be the most natural food for the horse, yet when corn is abundant, it proves a good substitute, and in other places wheat is fed with satisfactory results. I have fed a great deal of barley to horses, and think very highly of it. When I feed barley to horses I always cook it, and do not feed over two quarts to a ration.

There is a great deal of carelessness manifested in the matter of feeding grain to horses and in the sort of grain boxes used.

I have seen boxes used from which a large portion of the grain escaped through cracks while the horse was eating. I have seen grain boxes in the stables of careless horse owners become so filled with decaying matter, grain that the horse had refused to eat, that it was almost impossible to feed the usual quantity of grain. It is an exceedingly slovenly practice and most certainly injurious to the health of the horse to allow the manger to become dirty, or the grain box to become sour, filthy, or offensive in any respect. It is a good practice to scald the grain box every few days, as well as to take other precautions to insure healthy conditions for feeding the horses.

The capacity of the horse's stomach is of com-

paratively small proportion, and every facility should be afforded for properly digesting food. To this end the hay should be fed before the grain, so that the grain may remain as long on the stomach as possible. Should the grain be fed first, and hay immediately after, the latter, being the more bulky food, will be apt to crowd the grain out of the stomach only partially digested.

Grain and hay should not be relied upon as the sole food for horses, even the best quality of hay and different varieties of grain. I have known of horses that would stand for hours and eat apples from the tree. Apples may not be the very best food for a work horse; but, at the same time, a mess of apples occasionally will be a very agreeable change to almost any horse. There is nothing better than an apple to coax a young colt with, and in short apples are healthy, and an agreeable change in the diet of horses, and when there is a supply of apples grown on a farm they cannot be disposed of to better advantage than by feeding the horses all they will consume.

Potatoes and carrots are both very good for horses and need no preparation, not even cutting; of course they should be fed clean, and no more at a time than the horses will eat up clean. When horses are fed oats, mashes and vegetables indiscriminately, the feed box is very apt to become foul very easily. All kinds of vegetables that a horse will eat are healthy food, and they make a healthy and economical change in a hay and grain diet. All vegetables that are fed to horses should be first washed to avoid compelling the horse to eat the sand that always clings to potatoes and carrots, and they should be picked to avoid giving decayed or rotten vegetables. It is advisable to substitute a ration of vegetables in place of one mess of grain; thus, if grain is fed twice a day, then feed grain but once and vegetables for the second feed. If grain is fed three times, it will be better to feed potatoes or carrots once and grain only twice.

There is one respect in which we can make a great improvement in the feeding of our horses, and that is in the quantity of food. Every one concedes, or should concede, that the quality ought to be improved, but that the quantity might be improved with benefit to the horse may be a novel proposition. In speaking of quantity I do not mean that the quantity of hay and grain fed to a work-horse should be increased. Too much food is apt to produce indigestion and increase of flesh without increasing the ability of the horse to perform labour.—F. K. Moreland, in *Western Agriculturist*.

A HEIFER WITH A BROKEN LEG.

A correspondent of the *Journal* tells the following story of how a cow got her leg broken, and how a little home surgery spliced it again, and made it as good as new without much trouble, a useful hint perhaps, to many owners of valuable stock. He says:

A farmer showed me a few days ago a handsome Jersey cow, which was so unfortunate as to get a broken leg in the pasture a year ago last summer. He did not know how it was done, as she was found upon as smooth a field as he had. As a foot-path crossed the field, and as she had a slight cut upon the inside of the leg opposite to the break, it is quite possible that it was done with a stone thrown by some careless or malicious person. The break was in the hind leg, about five inches above the gambrel joint, and was apparently a bad break.

The neighbours all advised him to kill her immediately. It could not be set. It was hot weather. She was forward with calf, and it was no use to try it, was the universal opinion, and he said he did tell the boy to bring the axe and

he would kill her; but her patient look and lick his hand, as if appealing to him for sympathy and help when he went up to her, was too much. He decided to try to get her to the barn and see if he could set the leg and save the cow. With the assistance of the neighbours she was put upon a sled and drawn to the barn. Then with ropes and ruel bags a sling was made, in which she was hung up so as to stand upon the three sound legs, while the broken one hung in a hole made on purpose.

The splints and bandages he made himself and put on himself, although not pretending to much surgical skill; but he had scarcely hope enough of saving the cow to venture to employ a doctor to do the job, for he was a poor man, and thought the loss of a cow would be enough without spending any money on her. I think he is also one of that sort who think they can do what other people can, or at least have confidence enough in themselves, to try to do what other people can do, if they have occasion to do so. Having secured the cow in her sling in the shed and set the bone as well as he could, he made a practice of wetting it with a liniment made by steeping wormwood and smartweed together and mixing it with cider brandy.

When he thought the bone had had time to knit together, he used to take the bandage off two or three times a day, for a little while each time, and bathe and rub the leg. After a while the bandage was gradually loosened, and about nine weeks after the accident it was taken off altogether and the cow let out of the stable. During this time she had not lost a single feed and had improved in flesh, and had seemed to enjoy her position as invalid much better than human patients do. The leg was, when I saw it a year after the accident, as perfect as any leg, and the cow promises to be, as she is now, a very valuable cow for many years. I have told of this because many farmers have the idea that it is absolutely necessary to slaughter any animal which is so unfortunate as to get a limb broken. Some animals may not be worth the trouble of setting the leg and taking proper care of it. Some may be so wild as to render the taking care of them much more trouble than it would be if lame, but if the animal is worth the saving there is no more need of killing them because of a broken bone than of killing a man for the same reason.

TRAINING VERSUS BREAKING COLTS.

A correspondent of the *Ohio Farmer* gives his experience in training colts so that they will not require breaking, as follows:

"I have two Norman colts, one yearling and one three-year-old. When the latter was nine days old I made a halter for him, bedded a stall by his mother, and tied him in it. He gave a long, steady pull, fell two or three times, got up and shook himself, and that was the end of it. He has never tried to break away since. I petted him, gave a little bran and oats, and never permitted him to follow his mother when at work. In a few weeks he would go to his mother for his milk and then march back to his stall to be haltered. I fed him regularly as I did the other horses, and he soon began to paw and ask for food with the rest. I placed the feed sack on his back and let him stand and eat, until he grew accustomed to it. Next I put on the saddle, and next the harness, and by the time he was a year old he was not afraid of anything. I tied him to the work horses to go to and from water. When twenty months old I hitched him with another horse to the sled—good sleighing, no load, drove moderately, and he never scared. He was so thoroughly accustomed to the harness that there was no trouble whatever. I now work him on the near side with shafts. He takes a fair,

straightforward pull, which I regard as one of the highest qualities in a work horse. I consider him a better worker and more reliable at three than many that have been in bad hands for ten years:—under the whip, half fed, half harnessed, and poorly trained; do not let a colt run till three or four years old, and then half kill him in breaking, and perhaps ruin him for life."

TO DESTROY VERMIN ON CATTLE.

The *New York Times* says:—"There are effectual means of exterminating these vermin, carbolic acid and sulphur. The old-fashioned remedy, mercurial ointment, is too dangerous to use, except in experienced hands, and then may do more harm than good, by absorption through the skin. Carbolic acid in the proportion of one part to 100 of warm, soapy water, is the safest and easiest remedy. The affected parts should be thoroughly washed with the mixture and dried with a soft cloth, and if a mixture of one part of the carbolic acid with fifty parts of raw linseed oil, or sweet lard, is then applied to the skin and well rubbed into the hair or wool, nothing further need be done except in bad cases. A common application, and a good one, is a mixture of lard, one part of kerosene oil and one part of sulphur, well rubbed into the skin and hair. But something internal is required, and there is nothing better than a warm comforting mess of linseed or oatmeal gruel given once a day, and a bellyful of good clover hay, with half-a-pint of corn meal. This will make new creatures of the suffering animals, whether they are cows or oxen, or calves or sheep.

It should be remembered that salt water is said to destroy lice completely on cattle, with no possible injury to the animal. Salt can always be obtained and conveniently applied, and carbolic acid and sulphur are not always at hand in a farmer's house.

CANADA SHORTHORN HERD BOOK.

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

B. Mazurka Duke [18144], by 17th Duke of Airdrie [4807], George Murray, Racine, Wis.; J. F. Davis, Clanworth.

B. Gen. Middleton [18145], by Fawsley Duke 5th [11897], H. McCurk, Colville; John Baxter, Courtwright.

F. Moorish Belle [14928], by Major Hillhurst [11585], G. J. Rowe, Clarenceville; D. H. Moor, Moor's Station, Que.

B. King of Lisbon [18147], by Dominion Boy [6898], C. A. Binions, Iroquois; Jos. Rutherford, Lisbon, N. Y.

B. Lord Clyde [13151], by Sir Charles [11855], J. H. Loree, Louistoff, Man.; Wm. Usher, Campbellford, Man.

F. Gold Dust [14940], by Royal Beauford [6158], C. J. McMillan, Hillsburg; Jas. White, Erin.

B. Lord Nelson [18149], by General Morgan [12005], Geo. Ross, Blenheim; Thos. Gales, Charing Cross.

B. Red Tom [13178], by Prince Albert [3798], John McGee, Leeds Village, Que.; Wm. Church, Leeds Village, Que.

F. Pride of Louise [14941], by Court Springhill [4851], Jas. McLean, Pilot Mound, Man.; John McLean, Pilot Mound, Man.

B. Sir Wallace [18162], by Senator [7887], Jas. O. Wright, Guelph; Alex. McDonald, Ayton.

B. Trader John [18156], by Count Vinego [6782], John Vance, Clifford; O. & W. Calder, Clifford.

F. Silver Horns [14988], by The Lawyer [9453], John Vance, Clifford; O. & W. Calder, Clifford.

B. King Alfred [18174], by Butterfly; J. J. Routledge, Pomeroy, Man.; Jas. Johnson, Lint-rathen, Man.

B. King William [18178], by Butterfly, J. J. Routledge, Pomeroy, Man.; Albert Clark, Carman, Man.

B. Lansdowne [18172], by Butterfly, J. J. Routledge, Pomeroy, Man.; J. Johnson, Carman, Man.

B. Howard [18171], by York's Champion, J. J. Routledge, Pomeroy, Man.; S. T. Carr, Campbellville, Man.

B. Prince Charlie [18280], by Prince [9108], Alex. McKinnon, Erin; D. Watson, Caledon.

B. Prince Albert [18245], by Barmpton Hero [6595], Alex. Brockie, Fergus; Thos. Nicholson & Sons, Sylvan.

F. Largie June Bird [15081], by Earl of Largie [9946], D. McMillan, Largie; A. McWilliam, Dutton.

F. Young Fawsley [16136], by Baron Fawsley 4th [10897], A. McWilliam, Dutton; D. McMillan, Largie.

B. Emperor of Brookside [19246], by Western Comet [9521], A. J. Stover & Sons, Norwich; W. & C. A. Carroll, Norwich.

F. Red Rose Bud [15058], by Prince of Wales, J. & W. H. Taylor, Evelyn; G. Baskerville, Evelyn.

B. Young Briton [18268], by Prince of Wales, J. & W. H. Taylor, Evelyn; Chas. Jenkin, Kintore.

B. Prince of Wales [18267], by Duke of Crumlin [6898], J. & W. H. Taylor, Evelyn; Wm. Mahon, Evelyn.

B. Big Bear [13259], by Lord Lancaster, Jas. Stocks, Columbus; M. K. Ormiston, Port Rowan.

B. Sir Moses [18258], by 8th Duke of Thorn-dale [9908], John McCurk, Thorndale; D. Carroll, London.

F. Rosy Bawn [15045], by 8th Duke of Thorn-dale [9908], John McCurk, Thorndale; D. Carroll, London.

B. Northern Prince [18870], by King of Lambton [8784], R. Auld, Barwick, Jas. Maidment, Forest.

B. Nelson [18270], by Garfield [10984], G. Stewart, Valentia; John Brown, Cameron.

B. Norman [18277], by Dandy, C. C. Martin, Lennox, Man.; Hugh Ury, Deloraine, Man.

F. Annabella 2nd [16095], by Royal Butterfly 2nd [7781], R. Korgan, Islington; H. Jackson, Elmbank.

B. Lord Melgund [18800], by Bonnie Scotland [11754], E. D. Morton, Barrie; Thos. Craig, Craighurst.

B. General Middleton [18911], by Doubledee, G. S. Brown, Eureka Spring, Ark., U. S.; J. B. Lister, Meaford.

F. Snowflake [15112], by Model Duke [7480], H. Glazebrook, Simcoe; F. W. Rothers, Simcoe.

B. 4th Duke of Middlesex [18988], by 3rd Duke of Middlesex [8425], Wm. Hawken, Korrwood; D. Taylor, Napier.

F. Primrose of Arva [15121], by Marqui of Lorne [8981], Thos. Routledge, Arva; J. T. Routledge, Arva.

B. Duke of Elma [18982], by Duke of Bloom-ingdale [11988], L. Bowman, Winterbourne; Andrew Aitcheson, Listowel.

B. Newbury Duke [18985], by Barmpton Duke of Wellington [10875], John Morgan & Sons, Kerrwood; J. Patterson, Newbury.

F. Strathburn Lady [15188], by Newbury Duke [18985], John Morgan and Sons, Kerrwood; R. Webster, Strathburn.

CREAM.

A wise man may be pinched by poverty, but only a fool will let himself be pinched by tight shoes.

"What possessed you to turn tramp?" "No times were hard, and I didn't want to be without a loaf."

It was a trifling circumstance that clouded the domestic bliss of a recently married Toledo couple—she had combs, and he had a razor.

Some say that a man who would "beat an egg," would be so cruel as to "whip cream," "thresh wheat," or even "lick a postage stamp."

At a *séance* the ghost of Noah Webster wrote, "It is t'is times." He was right as to the times, but we are sorry he has gone back on his own dictionary.

PROFESSOR: "If you attempt to squeeze any solid body, it will always resist pressure." Class smiles and cites examples of exceptions which prove the rule.

MAMMA—Don't you think, Emma, you are getting a little too old to be playing with the boys so much? Emma—I know it; but the older I get the better I like 'em.

A young lady asked a gentleman why he never attended a church entertainment. "It only costs ten cents to go in, you know," she added. "Yes," was the reply, "it costs only ten cents to go in, but it costs about four dollars to get out."

Or all the joys that brighten suffering earth,
What joy is welcomed like a new-born child?

—Mrs. Norton.

O GRANT me, heaven, a middle state,
Neither too humble nor too great;
More than enough for nature's ends,
With something left to treat my friends.

—David Mallet.

THAT all men would be cowards if they dare,
Some men have had the courage to declare.

—Crabbe.

"WOMEN'S RIGHTS!" exclaimed a man when the subject was broached. "What more rights do they want? My life bosses me, my daughter bosses us both, and the servant girl bosses the whole family. It's time the men were allowed some rights."

WOMAN: "If I give you something to eat, will you saw a little wood?" Tramp: "No, mum; I'm too weak to saw wood. I'm not lazy, jest weak; but I'm willin' to do what I can. You give me a good dinner, an' I'll sit out in the corn-field for a scarecrow while I'm eatin' it."

"Just one," said the lover as he stood upon the stoop with his girl. "Just one," said the mother, putting her head out of the bedroom window above; "well, I guess it ain't so late as that, but it's pretty near twelve, and you'd better be going or her father will be down." And the lover took his leave with a sad pain at his heart.

"What smell is that, my dear?" "Cloves, my love!" "But the other odour?" "Cinnamon, my darling!" "But I smell something else!" "Oh, that's allspice." "But I'm certain I smell something that isn't spiced at all." "That's an apple I ate just before I came in." "Well," said Mrs. B., "if you'd only swallowed a ham sandwich and a drink of brandy you'd have all the ingredients for a good mince pie."

A FARMER was hoeing hard on his patch of land when one of those town loafers approached the fence. "Hello, Farmer B., what do you think of the outlook?" "What outlook?" "Why, the business outlook." "Didn't know there was one." "We are all talking about it down at the store, and they sent me up to hear what you had to say." "Oh, yes, I see, well you tell 'em if they will stop talking and go to hoeing that the country will prosper without any outlook. Do you hear?"

SHEEP AND SWINE.

PRIZE FARM SHEEP MANAGEMENT.

A correspondent of the *London Field* describes sheep management on a prize farm as follows: "Mr. Hawkins, clever man as he is at his trade, tells us that he finds sheep pay better than cattle. He has an excellent flock of big, well-bred, matchy ewes, with substance and character, and the flock at the time of our visit numbered 978 head, composed of 288 store ewes, carefully selected as to type, colour and wool, and comprising a considerable proportion of shearlings; eighty-five draft ewes, which were very fresh, and being all sound as to teeth and udders, should command a good price for breeding purposes; 349 mixed lambs including a few rams, which are sold in autumn. The lambs had all been shorn at the end of June, averaging about one and a-half pounds of wool each; and this is done because shorn lambs get more benefit from dipping, and are more easily protected from injury by fly. We believe also that growth is better. Anyway, the practice is becoming very general in this part of the country; 254 feeding sheep, principally shearlings, with some fat ewes. Mr. Hawkins prefers to bring his sheep out on seeds at one and a-half years old rather than finish them on turnips at an earlier period, which could easily be done if considered desirable; but it is argued that this would require more cake and corn to be consumed on the turnip land, and endanger the success of the barley, which is certainly quite as heavy as it should be to stand up, whereas the eating of a large quantity of cake on seeds improves the chances of the following wheat crop. Then Shropshire mutton is suitable for summer consumption, and the sheep produce large weights, twenty-two pounds to twenty-four pounds a quarter. These feeding sheep are a grand lot—full of condition and ready for market at any time. The lambs were fed on seeds, having cake, and appeared to be doing excellently; but we were told by Mr. Hawkins that he had had very serious loss of lambs in the spring whilst with their dams, from curd in the stomach, which he attributed to richness in food and cold east winds."

FATTENING SHEEP.

Feeding sheep for market is an important industry in this country; but anyone visiting our sheep markets cannot help being convinced that many of the feeders do not understand their business and the importance of putting their stock in the best possible condition before shipping. Every week there are plenty of sheep sold in the markets for scarcely enough to pay transportation, that would bring at least double what they were sold for if they had only been made fat and put in proper condition before shipping. Sometimes farmers ship their sheep before they have been thoroughly fattened, because the sheep are not doing well and fattening properly. It is very often the case that sheep do not fatten rapidly; but is not usually the fault of the sheep, but rather of the feeder, his feed and the manner of feeding. Often the animals are fed too heavily on grain at the start, and are foundered, or at least cloyed. Not a sufficient variety of food is given, but corn is often poured down for them day after day, until the sheep become so tired of it that they cannot be induced to touch it. Filling the racks full of dry hay, and the troughs full of dry, hard corn, twice a day cannot be considered a judicious method of feeding. Any animal, when fed heavily, should have a variety of food, and especially is this true of the sheep. A change of rough feed is essential as well as of grain. The feeding should commence by giving a small quantity and gradually increasing the grain rations as the

season advances, until within a month or six weeks of the time they are to be marketed, as may seem best from the condition of the sheep, when they may be given about all the grain they will eat. Under no circumstances should this very heavy feeding continue more than six weeks, as there is great danger of the animals beginning to go backwards after being fed heavily for this length of time. The feed should be varied with the different kinds of grain, and by feeding the whole grain and ground feed. Whenever possible, roots and ensilage should form an important part of the rations, and do not forget that heavy feeding makes the animals feverish, and that they must have plenty of fresh water if they are expected to do well. In this way the sheep will not be overfed, their thriftiness will be kept up, and they will be ready to fatten rapidly when the heavy feeding commences.—*National Stockman*.

PIGS ON PASTURE AND GRAIN.

A good pasture is important to the health of pigs, and some think that the pigs should get all their food from the pasture. This opinion has been formed, because they think pigs do not gain in weight enough faster on grain with pasture, to pay for the grain. But they do not take into account the fact, that when pigs are put on a good luscious pasture, the succulence of the grass dilutes the growth made by the pig and adds weight fast, but this weight is not solid fat, but largely water. This weight must be ripened into solid fat by grain. If pigs run all summer on a good pasture without grain, although they may appear to have done well, yet when put in pen in the fall and fed on grain, they will not gain a pound in weight till this watery summer growth has been changed to solid fat by the grain. It sometimes takes twenty days' grain feeding to ripen the grass growth. It is much better to feed a small amount of grain on pasture, and this will ripen the growth as fast as made. The grain is all well expended, and will pay a better profit than the same amount fed in the fall. Small pigs should not be fed wholly upon corn. It is much better to feed two bushels of oats with one of corn, or better still, to feed oats and middlings. The young pig should grow its muscles and frame, and not lay on much fat. After the pig has stretched out its body all summer, then put on the fat and you have the finished animal. In fact, when grain is properly fed on pasture, pigs will begin to lay on fat as soon as the frame is sufficiently grown, and they are often in good condition for market in the fall, taken directly from pasture. So we think the grain fed on pasture is even more profitable than that fed afterward.—*National Live Stock Journal*.

The Chester White hogs are still the favourites in Pennsylvania, a position they have held for many years, although coming in competition with all other breeds.

HAVE your pigs and hogs access to plenty of fresh water? If not, provide it as soon as possible. Good, pure, fresh water is as essential to healthy development in the hog as in the cow or horse.

GET a good close look at the hogs at least once, and, if possible, twice a day. Spot and separate the first to show symptoms of weakness, loss of appetite, constipation or looseness of the bowels, or any other signs of disease, and keep separate until all danger is passed.

FARMERS cannot be too guarded in the isolation and protection of their hogs. Disease is here, there and nearly everywhere, and a little carelessness may be the means of losing an entire herd, whilst with ordinary care the disease may possibly be entirely avoided.

SHEEP enrich land very materially when feeding over it.

A LARGE wool commission merchant in Chicago writes that the increasing preference of manufacturers the past season for unwashed wools to washed has been more noticeable of late, in that many lots of washed wools held at what have been considered relative prices are still unsold on all markets, while unwashed, of some grades, are all sold. It is better for all concerned that wool should be shorn unwashed.—*Boston Cultivator*.

SOME Western farmers advocate keeping their swine in the yards every morning in the fall of the year until after the dew is off the grass. The reason given is that during cool nights the germs of hog cholera are thought to collect up on damp grass; also that the air at the surface of the earth is laden with malarial poison, which owing to the hog carrying his nose near the ground, is taken into the system, and is liable to produce disease.

THE system of washing in cold water on the sheep's back never results in a washed fleece fit for the manufacturer, but only the eradication of an unknown and uncertain part of the yolk contained in the fleece, which is thus changed into an unmerchantable commodity to be sold on its uncertain merits as to shrinkage. The name or designation of washed wool has ceased to have any charm, and the sooner the practice of washing is entirely abandoned, the better it will be for the sheep, their owners, and the trade generally.—*Wool Journal*.

SHELTER is very necessary at this season of the year for sheep and cows, and especially for all young animals. The rains are often chilling, and an animal drrenched to the skin all day is certain to suffer in one way or another; it may be in loss of flesh, in lowering of vitality, or in the contraction of disease. A roof overhead, with a few boards on the upper part of the sides, will answer the purpose very well; but as cold weather approaches in the latter part of the month, the shelter should be correspondingly good. Sheep especially should be provided with a place of cover in the season of autumn rains.

CLOVER hay, in good condition, is a perfect fodder for sheep. I know farmers who feed nothing else but clover hay to mutton sheep, and they have their lambs on this food and do well. After lambing they are fed some grain, to keep up their strength and to make milk. The lambs are sold early, and of course come early. Lucern would do as well, but being more bulky—that is, a less proportion of leaves, blossoms and finer stems—more bulk would be required at a feeding, as the sheep do not eat the larger part of the stems or vines, unless they were cut very green. This is the only difference that I can see between the clover and the lucern.—*F. D. Curtis, in Country Gentleman*.

A HOG is not naturally a nasty animal. On the contrary, he is very particular where he sleeps and what he eats. It is true, in hot weather, if he cannot get pure, cold water to bathe or roll in, he will take the best he can get, even if it be the filthiest mud-hole. If you want sweet pork, the hog must have pure water for drink and for wallow. When shut up to fatten, he should have a clean plank floor, with a little clean bedding, changed often. Give clean corn, either raw, cooked or ground, with pure water. In summer time he should have with his grain all the sweet grass he wants; in winter second-growth clover hay. In summer and winter he should have every day as much as he will eat of lime and salt mixed. Never let him stop growing, and slaughter him in his best flight of growth, and then you will have as sweet pork as you did at your father's table.

POULTRY AND PETS.

POULTRY QUERIES ANSWERED.

Although the following queries may seem of but little consequence to some, yet we take occasion to reply to quite a number by giving them in numbered order with our answers below.

1. What is the best cure for gapes?
2. Will Bantams mix with larger chickens?
3. What is the best method of preserving eggs, say to keep a year?
4. Give me a plan for a good chicken coop, one that will keep out rats?
5. How many eggs will a Brown Leghorn lay if not allowed to sit?
6. How many chickens should be allowed to run with a hen?
7. How many eggs should an ordinary hen be set upon?

8. Would a cross from a Plymouth Rock and Brown Leghorn be desirable for good layers?

9. What should be fed to hens in winter to enable them to lay well?

1. We have found a drop of spirit of turpentine mixed with a pinch of corn meal, forced down the throat twice a day, an excellent remedy; or a teaspoonful in a pint of corn meal dough, fed to a number is very efficient. Gapes comes from filthy surroundings.

2. Bantams will cross with larger fowls as we have found by experience.

3. There are several methods, but we have known eggs to keep well when packed in dry salt, in boxes, and the boxes turned three times a week. Pack the eggs on end, not allowing them to touch each other, filling the spaces with salt.

4. We think a cement floor to a poultry house is the best method of keeping out rats. Wire netting may be used whenever possible.

5. Individual hens are said to have reached as many as 200 eggs a year, but such records are doubtful. Ten dozen is a large average for a flock.

6. In summer a dozen chicks are enough and in cold weather eight.

7. Ten eggs will give better results than thirteen, especially in winter.

8. A cross of a Plymouth Rock and Brown Leghorn would be excellent. Use Brown Leghorn cocks and Plymouth Rock hens.

9. Keep them warm. Feed a variety of grain, and make them scratch for all they get. Allow meat three times a week, with clover chopped fine and steeped in water. Avoid getting the hens too fat.

DISEASES OF CANARY BIRDS.

Outward signs are absolutely necessary to judge of their disease, and when birds are ill they exhibit strong symptoms. The first to mention is swelling of the stomach, which attacks them at a month to six weeks old, in consequence of over-feeding on soft food, such as salad and chickweed. The extremity of the body becomes swollen and of a dark red colour, very hard, and full of small red veins. For this ailment put a small piece of alum in the water and renew it every day for at least four days. This will be found very frequently to prove a complete cure. Still another remedy is to put a rusty nail into the water, which latter should be changed twice a week, leaving the nail in it. Boiled bread and milk with canary seed also boiled in it, is frequently a cure. Put this in the cage for at least five mornings, and at twelve o'clock you may give the usual food. Another remedy is to put the bird into luke-warm milk for six or eight minutes, in order that a portion of it may be absorbed by the pores, then put it in warm spring water, after which wipe it with a

soft piece of muslin before the fire until dry; then place the bird in the cage and set the latter before the fire a short distance away, or, if you choose, in the hot sun in the room. Afterward hang the cage in its place, giving the bird lettuce seed and letting him rest for the next day, but repeating this the third, and if necessary, three or four times, with the interval of a day each time. This treatment will afford relief if faithfully followed out.—*Newell Lovejoy, in Good Housekeeping.*

REGULARITY in feeding is beneficial in many ways.

LIMITED numbers of fowls pay better than too many.

IT is of no use to attempt to keep fowls unless they are well attended to.

CLEAN hen houses and runs will bring in a goodly share of clear profits.

Mix your cooked food once a day fresh. Don't give the poultry sour meal dough and stale messes.

ONE cannot reasonably expect to raise strong and healthy fowls if they are kept in a starved and neglected condition.

ABOVE all things do not cram into a space where twenty-five only can be made comfortable, fifty or a hundred birds.

LET your boys and girls have some fowls, one or two good poultry papers, a good hen house, and see what they can and will do.

EGGS will hatch a much larger percentage, and the chicks will be stronger, if you will use a two-year-old cock mated to yearling hens.

FEED the morning meal to your fowls warm. Scald the meal, boil or mash the potatoes or turnips, and mix these for the early day's feed.

GIVE hens constant access to lime in some form. Hens must have the raw material in order to manufacture shells. They cannot make them of nothing.

WHITE Cochins were bred in England as early as 1851. They have held a high place in the estimation of fanciers ever since, and are a deservedly popular variety.

Too much stimulating food causes over egg production. The result from such a course will be bad hatches, weak and puny chicks, disaster and ruin. Feed judiciously.

POULTRY keeping can be made an auxiliary to other vocations, and that, too, without interfering with their duties, and, if managed properly, will bring in handsome returns.

As a general rule, the farmer should not desire that his poultry should be very fat, for there is a kind of antagonism between reproduction and the storing of much fat in the tissue.

FEED the old moulting hens sparingly on good food for six months to come. Don't permit them to get gross and fatten inwardly, as they will if allowed all they will eat at this time of the year.

THERE are few fowls more prolific than Games; and where there is a good, wide range of any kind, no fowls will prove more profitable. They eat little in proportion to other larger fowls, and are very good layers.

FOWLS confined in limited quarters should be daily supplied with such natural food as they would obtain when they have a free run. Dry, hard food with scant drink, will be productive of injurious results in a number of ways.

THE White Faced Black Spanish lay as large, if not the largest egg of any variety. Their eggs are perfectly white, well shaped, and of good flavor. It is a mistaken idea that this variety is difficult to raise. Our own experience with them has demonstrated the fact that they are decidedly hardy and thrifty.

If your poultry is ready for market now, why keep it until Christmas and New Year? Our advice would be to sell all that is in prime condition now, and then you will have a better opportunity to push forward the remainder.

EGGS will keep, in fall and winter, from one to two months and then be suitable for hatching. They should be kept neither in a very hot nor a very cool place. A room heated by a stove is bad for them, so also is a very damp cellar.

A FLOCK of geese seem to be fairly under your carriage-wheel—almost under your horses' hoofs, and yet somehow they contrive to flap and waddle safely off. Habitually stupid, heavy and indolent, they are, nevertheless, equal to any emergency.

FEED the table scraps to the chickens instead of throwing them to the pigs. They are worth more to the poultry; and everything that falls from the table—dry crusts, vegetable leavings, cooked meat, or almost any old bits, will be eagerly devoured by old and young fowls.

AS soon as the game season opens in November there is a drop in the prices of poultry stock. When cool weather comes those who are far away from the large markets can forward their stock in safety, and hence the market is over-stocked and prices go down. Here are two more reasons for selling such of your flock as you find in good condition.

EVERY one who has fowls should provide a dust-box. Fine road dust is best, but coal ashes, sand, pulverized loam, or clay, even, are all very good, and with a sprinkling of flour of sulphur or Stoddard's carbolic powder, constitute as good a bath as can be desired. This should be placed in a sunny exposure of the room, and kept dry and clean, so that the fowls may enjoy its benefits when they choose.

IN the poultry business we should aim to produce chickens as well as eggs. The one does not necessarily interfere with the other. In fact, the growing of chicks is a necessary adjunct to the business, for it not only fills out the balance sheet on the right side, but gives one plenty of pullets for layers, and they are always a decided improvement on old hens for winter work. The cockerels can always be disposed of at from 100 to 200 per cent. above cost. Ducks got out early are as profitable as chicks.

FOWLS that are killed directly from a free range, where they have been bountifully fed for some time previously, but have taken plenty of exercise, and in perfect health, are to be preferred for the table to those that have been kept in a close coop. True, a greater amount of flesh can be produced in proportion to the grain fed when confinement is resorted to, and, if the prisoners are well attended and the term of incarceration does not last too long, there is not much danger of disease. Still we prefer (as who does not?) the flesh of the poultry that have always been allowed their liberty, and air and sunshine without stint.

THE Toulouse geese are the largest in the world. The Embden geese do not often grow so large as the Toulouse; but their flesh is considered superior, and in some markets the pure white feathers of the Embdens will bring a higher price than those from coloured geese. The laying qualities of the Toulouse and Embden rank about the same, the best layers averaging thirty eggs before offering to sit. The Toulouse are poor mothers; the Embdens good. The China geese—of which there are two varieties, the brown and the white—are smaller than the Toulouse and the Embden, and lay smaller eggs; but they are usually better layers, while for hardness, early maturity, and fine feathers, they are quite equal to the larger breeds.

GARDEN AND ORCHARD.

THE GOOSEBERRY.

BY B. GOTT, ARKONA.

The name of this fruit has evidently come down from very early times, and is either a corruption from Grossberry or *Krausberre* of the Germans, in reference to its roughness of skin or its crispness of flesh, or it is indicative of an old practice said to have been in vogue amongst our forefathers of using this fruit in the shape of a sauce over their geese. However this may be, it has come down to us from generations, and by this name only we know the fruit and its rough thorny bushes. All gooseberries, however large, fine and beautiful, or of whatever shade or colour, have originally sprung from rough and thorny wild types that are everywhere indigenous to the north temperate zone, and to both hemispheres. Those of our North American gardens have doubtless come either directly or indirectly through successive generations, and not very far removed from the wild type as *Ribes rotundifolium* or *R. gracilis*, both of which are everywhere plentifully distributed over the vast and diversified regions of our North American forests. Some again have been crossed with highly improved European sorts; but unfortunately for us, so far, from these crosses no substantially good results have been produced, as our climate seems to be averse to anything of this kind. The gooseberry of Europe, and especially the gooseberry of England, is the consummate result of generations of high and careful culture. It is the product of the best and most skilful manipulation that can be brought to bear upon it; and, like the people themselves, distinctly bears upon it the marks of these generations of the highest and most accomplished breeding. In the English county of Lancashire, the very home and most favourable spot known for the gooseberry, its culture and perfect development has come in late years to be almost a mania, and is indulged in by all classes of the people. In that county their annual gooseberry shows or exhibitions are something astonishing for vastness, variety and grandeur. A gooseberry book is frequently issued, in which hundreds of old and new sorts are named and described. This kind of thing, however, can never become popular with us, as our conditions and environments are by no means favourable to the growth of this fruit in perfection. Although this may be, and is strictly true, yet we are highly delighted that we can in many favoured localities and situations produce many very fine sorts in comparative abundance. Our impression is most decidedly that yet more and greater things may be accomplished in this line. What desirable specimens of beautiful gooseberries may be propagated, by taking our wild sorts that are very plentifully scattered about us, with a few generations of reproduction and wise and careful selection, is at present utterly impossible for us to foretell. Here is a great and inviting field of experiment open and encouragingly beckoning some of our energetic and painstaking cultivators, upon whom the honoured mantles of an Arnold or a Saunders shall fall, to be taken up untried and to be still further used and honoured.

As a fruit the gooseberry has already gained for itself a name and a place in our national domestic economy, and a place, too, that can scarcely be filled by any other fruit. Coming, as it does, so early in the season when fruit of all kinds is quite scarce and hard to be got, it meets with a ready demand, and is quickly bought up when offered on the market. It is used on the table for pies, tarts, puddings, marmalades and jellies, and is either preserved or canned. It is generally picked from the bushes in its green

state, or just at that point when ripening commences to enlarge and colour the fruit, as at that point it is said to be in the best condition every way than at any other time. It is generally sold on the market by the quart, and will usually bring in our local markets from 10 cents to 15 cents per quart retail, and if the crop is good and has been well attended to, pays the grower very well. One acre of good soil planted to gooseberries will take in 2,725 plants, and these well grown and in a good state of production, will, even at a low calculation, pick two quarts on an average each; and this product, at the lowest price, will realize for the grower a gross \$545, which is unmistakably a very good showing per acre. By this it will be seen that the gooseberry, as a product of our soil, is of some considerable importance to the fruit-growers of this country. It is usually propagated by cuttings, and by layering the young wood of the parent plants. For this purpose the best and most thrifty bushes are used, and the young wood is carefully pegged in the soil, tips out, and covered with earth and moss to encourage root growth. When roots are thoroughly formed the parts are taken off and separately planted in nursery rows to form independent plants. This is the best method of propagation. For the purpose of making cuttings the young wood is only used and cut up into pieces of about six inches in length, and kept safely from frost during the winter, and planted in the cutting beds in the spring to become well rooted, and afterwards removed to the nursery-rows as independent plants. This method is considered the fastest, and gives good satisfaction. But the only method of propagation to reach permanent improvement in the results is that by means of the seeds. This method can be carried on almost without limit, and from generation to generation. To be careful work in this method we are indebted for all those improved and very good varieties at present in our possession. After the young seedlings, as they are called, are once well established, and are known to have valuable qualities, they are propagated to any extent by the methods before specified. In this way we become possessors of valuable improved qualities in all our domestic fruit that we can prize for our everyday use.

(To be continued.)

GRAPES VS. APPLES.

Thirteen years ago I received a bundle of grape cuttings—Concord and Ives. They were set out in a bed of rich and well prepared soil, and nearly all took root. As there were more plants than I wanted, many were given to neighbours, but I set out about fifty plants—around the house, along the garden fence, and in a corner of the orchard.

About the same time I planted two acres of apple-trees. Now for the results:

Within three or four years the grapes began bearing, and have borne more or less fruit every year since, except one. Not a vine of the two varieties named has been winter-killed, and this year the crop has amounted to not less than twenty-five or thirty bushels.

Of the apple-trees about half have been winter-killed, while the varieties that escaped began bearing fruit last year, yielding but a few bushels. This year the crop is larger, but the total yield from the two acres of apples will be less than from the grapes, which occupy less than four square rods of available space.

These grapes have had almost no care. They were planted in good clay land, and have been trimmed and manured a few times, though not annually. It is certainly speaking within bounds

to say that no other fruit is more easily raised than the Concord grape, and to my taste few fruits are more acceptable, while I find none so healthful.

The Ives grape is as hardy as the Concord and ripens a week or two earlier. It is an excellent grape for cooking; but is too acid to suit the palates of most people as a dessert fruit.

For those who would like a variety of grapes, I would recommend the Duchess or Lady among the white grapes, the Delaware among the amber grapes, and Moore's Early among the blacks. The latter is simply an early Concord.

To start with cuttings requires no outlay except the labour, provided you are so fortunate as to come across a friend at the moment when his vines need trimming, which may be done at any time when they are not frozen, between the fall of the leaf and the starting of the sap in the early spring. The cuttings should be trimmed to two eyes (being cut off square and smooth below the lower eye) and set in a bed of loose earth, deep enough to cover the upper eye half an inch, leaving an inch or two of the upper end of the cutting as a guide in hoeing. The cuttings may be set out in the fall, as soon as taken, or they may be buried in a dry place and kept till spring. Yearling plants may be bought of any nurseryman, however, at 10 cents each, for Concords, and thus a year's time saved. For busy farmers this is cheaper than starting from cuttings. Yearling plants are not only cheaper than two-year olds, but better, as they have more fibrous roots.—*Hortus, in Farm and Fireside.*

Young trees and those lately set should have a mound of fine earth around their trunks, to prevent any water from standing and freezing there. Better still if the whole surface is slightly raised about as far as the roots extend.

The successful planting of fruit-trees in the fall depends very much upon the method pursued. If the work is well done, fall planting is preferred by many, because the growth of the new roots goes on all the winter, and a year's time is saved by it.

Prune the grape-vines and raspberries, and lay down and cover all which are tender, to prevent winter-killing. Give the strawberry bed a heavy mulching, and put plenty of manure on rhubarb and asparagus beds, and fork it in well. It is much better to put it on now than in the spring.

In answer to an inquiry—the number of years which small fruit will continue to bear before renewal depends greatly on soil, treatment and kinds. Strawberries, under ordinary management, last two or three years, and then fail; but on strong and rich soil, with the runners kept cut, they often do well for twice that length of time; and some varieties, as the Cumberland, continue longer than the Wilson and others. Raspberries, not enriched, run out in a few years; but with repeated manuring, good culture, and careful pruning, they will last from six to ten years. Under similar management we have currants and gooseberries which have borne well for more than twenty years. On a thin, sandy soil, none of them will bear so long as on a strong loam.

A simple cake is made of one cupful of sugar, half a cupful of butter, one third of a cupful of milk, three eggs, one and one half cupfuls of flour and a teaspoonful of baking powder.

TABLE-COVERS for country-houses are shown in linen damask, with borders of white figures on dark chocolate-brown. Some have hunting scenes in the border with the centre to correspond, after the style of the old-fashioned German damask covers, which depict realistic scenes from the time of "the grand old gardener and his wife" to the wild boar hunt of a century ago.

THE DAIRY.

THE DIFFERENCE IN THE ASSIMILATIVE AND DIGESTIVE POWERS OF COWS.

All cows are not constituted alike in their assimilating and digestive powers. Even those that are possessed of large capacity to consume food and that give a good flow of milk, and make a satisfactory yield of butter, from what may be termed liberal feeding, that is, a course of feeding stronger and larger in quantity than the usual dairy rations. There are many cows, under such treatment, that will produce twelve to fourteen pounds of butter per week, utilizing the food economically and in the right direction—by its conversion into rich milk, and not diverting it towards producing flesh or fat upon the carcass—but if fed beyond a certain point, or the rations are increased, will lay on flesh, instead of increasing the milk flow or adding to its richness.

The writer tried an experiment with a young Jersey cow, in her three-year-old form, the result of which bears upon this point. She was giving about twenty-five pounds of milk daily, two months after dropping second calf, and was fed like all the others in a stable of fifty cows, that were in same condition as to milk flow. The blood lines of this young cow were well-known to be rich in butter, her ancestors for many generations having been bred in this herd, the owner receiving ample assurances, year after year, that the entire strain was one of great butter-producing capacity. They were all, without exception, great feeders and large milkers, long continued. The cow under consideration had milked well, though with her first calf, and had worked down lean in flesh. Though she had not been at any time highly fed, her performance at the pail was regarded as satisfactory, and, all things considered, her future as a butter cow was esteemed to be of more than ordinary promise.

Her daily rations of rich food were gradually and carefully increased from eight quarts to thirty-two quarts, divided into eight feeds, between the hours of five o'clock in the morning, and eight o'clock in the evening, when she was left without feed, except a supply of hay, until the next morning. No grass was given, as the test was made during the winter, but roots were furnished, and eaten with relish, twice daily, besides a limited amount of hay, of which she ate as inclination prompted. This course of feeding was continued for about six weeks, and at no time during the test did the cow indicate in any manner that she was being overfed; her appetite was unimpaired; she ate her feed with as much relish, and looked as anxiously for it at the end of each two hours, as she did when fed but twice daily. A strict and careful note was kept of her milk and butter product, both before the course of high feeding was begun, during its continuance, and at the close, and, beyond a slight increase of a fraction over one pound of milk a day, no change was observable in her yield—the amount of cream and the butter obtained from it remained about the same (her capacity was about thirteen pounds of butter per week).

The results of the extreme high feeding, however, were plainly seen in another direction—which pointed conclusively, and with unerring certainty, to her relative value as a dairy animal. Her increase in flesh, and general improvement in appearance was rapid and continued; she began to gain in flesh shortly after the system of high-feeding was adopted, and while no absolute falling-off in the milk or butter product occurred after it had reached a certain point, there was no possibility of developing a further capacity in that direction, and the food consumed in excess

of that required to supply the milk-producing capacity was used in forming flesh, and no amount of food, of whatever character, could change the nature of that cow and cause her to produce butter or milk beyond a certain limit.

In contrast to this case, another cow, in the same herd (submitted to about the same course of treatment) that had produced fourteen pounds of butter in seven days from fairly liberal rations, with increased feed, made a little over nineteen, and her condition as to flesh remained the same as at the beginning of the high-feeding, no perceptible increase having taken place. Neither of these cows was fed to her full capacity at any time. The first proved herself to be a profitable dairy cow so long as the amount of food she consumed was regulated by her capacity to convert it into milk; beyond this point it would not pay to feed her for that purpose. The other would return large profits for any amount of milk-producing food that might be fed to her without endangering her digestive and assimilating system, directing the entire beneficial effects of the food into the milk-producing channel, reserving only a sufficient amount to sustain vigorous health and a good working condition. Such a cow very justly earns a period of a month or two of rest from her labours at the end of each milking period, in order to recuperate and build up her exhausted condition for another profitable season.

It is, therefore, of the highest importance to the dairyman that a thorough test of the feeding capacity of all his cows be made that he may determine with certainty to what extent they may be profitably fed in order to reap the very best returns for his investment and his labour. By no other plan can this knowledge be gained with entire accuracy, except by testing each case separately, and retaining only those that prove themselves competent to convert a sufficient amount of proper food into milk to constitute them of value to his interests.—*Cor., National Live Stock Journal.*

HOW TO SELECT A COW.

The best milch cow as a rule, says a writer in the *Agricultural Gazette* (English), is of medium size and small-boned. The head is small and rather long, narrow between the horns and wide between the eyes. The lips are long and thick, giving the muzzle a flat appearance. The ears are thin, covered with long, but soft, silky hair, the inside of the ear being of a rich orange colour. The eyes are large and bright, with a placid expression, the horns set on a high pate, bending outward at the base, and light, clear and smooth; the neck long, clean and thin, slender and well-cut under the throat, thickening handsomely as it approaches the shoulder; but entirely free from anything like a "beefy" appearance. The shoulder-blades should meet narrow at the tip, widening gradually towards the points, which should be broad and well-rounded; the ribs rather straight and wide, indicating a good digestion and constitution, for everything depends on that in a good milch cow. The loins should be broad and the hips high and wide; the rump even with the hips; the pelvis wide, giving plenty of room for the udder; the thighs thin; the hind legs a little crooked, and small below the hock, with a long, large foot. The udder should be long and broad with the teats all the same size and well set apart; the belly to sag a little in front of the udder, and rise slowly as it approaches the brisket, and somewhat large as compared with the size of the cow. The tail long and slim, tapering gently to the end. The hair must be soft, indicating a mellow skin, which, on taking in the hand, feels like soft kid gloves, and no coarse, rough hair

will grow on such skin. The colour of the skin should be of a rich butter-yellow. This is the first point in handling. Then, pass your hand on the belly in front of the udder and feel the "milk veins." They are an infallible mark of a good milk cow. The larger they are the better the indications. In extra good cows they branch out into four veins, but they all unite before reaching the udder. The more irregular the course the more sure you may be that the cow is a good milker. The udder should be covered with a short, downy coat of hair. This hair should begin to turn its backward course from the front teats, then on the back part of the udder, called the escutcheon, and on as far as the vulva, in the best cows. The wider the belt of this upturned hair the better; it should be short and velvety, covering a soft orange-coloured skin.

WASHING BUTTER.

It is stated that a new method of washing butter has been patented in Germany. As soon as gathered in the churn in particles of about the tenth of an inch in size it is transferred to a centrifugal machine, whose drum is pierced with holes and lined with a linen sack, that is finally taken out with the butter. As soon as the machine is set in rapid motion, the buttermilk begins to escape; a spray of water thrown into the revolving drum washes out all the foreign matters adhering to the butter. This washing is kept up till the wash-water comes away clean, and the revolution is then continued till the last drop of water is removed, as clothes are dried in the centrifugal wringer. The dry butter is then taken out, moulded and packed. It is claimed that the product thus so fully and quickly freed from all impurities, without any working or kneading, has a finer flavour, aroma and grain, and far better keeping qualities than when prepared for market in the ordinary way.

A cow should always be taught to allow anyone to milk her, either man or woman, and for this reason it is best to change about in milking occasionally, so that the cow will not become too much accustomed to one person's attention.

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

The first year of the heifer demands the most care. The cow is partially a creature of habits, and when she has her first calf should not be permitted to dry off sooner than eight months. Her quantity of milk may be small near the end of that period, but she should be milked as long as possible. The next season the difficulty will not be so great, and by the time she has her third calf her habits will be fixed.

No one can afford to be satisfied, says the *Indiana Farmer*, to feed a cow that gives only eight or ten quarts of milk per day to make but four or five pounds of butter per week. Good cows are not for sale except at good prices, and one wants to be sure they are good when he buys and pays for one. A writer suggests this plan of testing the quality of the cow. He says to take a sample of the strained milk in a straight-sided glass tumbler or a fruit-jar and let it stand undisturbed in a vessel of cold water—ice water is best—two or three hours. You will be able to judge of the amount and colour of the cream. In ice water, cream will rise in two hours, not completely, but in great measure.



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LINEN CAKE is a cake with chocolate and coconut mixed together and put between the layers. Prepare the chocolate after any of the well-known methods, and add the grated cocconut to it.

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

GRILLED OYSTERS.—On a very fine wire grid-iron (or one made of wire net used for screens) place some slices of fat pork, cut as thin as possible; on each slice lay a good-sized oyster or two small ones; broil and serve hot with fried parsley.

FROSTING GLASS.—Take an ounce of Epsom salts and heat half a pint of beer; work the two well together and leave until cold. Dab this mixture over the glass in the same manner as oil paint, and let it dry, then put a second coating over the first.

MACCARONS.—A pound of blanched almonds pounded fine in a mortar, white of four eggs whipped to a stiff froth, two and a half pounds of sifted loaf sugar; mix all well together, then add the whites of ten more eggs, beat all together until very light; drop with a spoon on stiff white paper and lay in a baking tin in a slow oven, after having dropped upon each a few small bits of sliced almonds.

TOMATO SOUP.—An excellent tomato soup is made in this way. It is so simple, and requires so little skill in its preparation, that it will prove acceptable to many: One quart of stewed tomatoes, strained, so that no seeds remain; add a generous quart of boiling milk; put a piece of butter the size of an egg in the tureen, add two tablespoonfuls of rolled cracker, and salt and pepper to taste. Pour over this the boiling milk and add the strained tomatoes; mix thoroughly and quickly and serve.

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TO THE PUBLIC.
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Johnnie R. Parsons
(Mayor of Rochester for 17 years past.)

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Miscellaneous.

Isn't the best way to teach a baby to walk, to give it in charge of a step-mother?

The price of real estate was under discussion at the club, when one gentleman remarked: "Jones, old boy, I know where you can buy just the nicest little home—splendid cottage, grand fruit trees, and all that—for a song." "Just my luck," said Jones. "I can't sing a note."

BIG MEDICINE MAN (the only original etc.) "Take one bottle of Nature's remedy, 'Herbs of Sunflower,' and receive your sight." Blind Gent: "An' wud yez be after wantin' me fur ' wurk meself oawt o' er job? Cum nare me, and o'ill caress ye wid me club."

A **GENTLEMAN** in New Orleans was agreeably surprised to find a plump turkey served up for his dinner, and inquired of his servant how it was obtained. "Why, sah," replied Sambo, "dat turkey war roosting on our fence tree nights; so dis mawin' I seized him fer de rent of the fence."

WELL matched in politeness and readiness was a gentleman, whose button caught hold of the fringe on a lady's shawl. "I'm attached to you," said the gentleman, laughing, while he was industriously trying to get loose. "The attachment is mutual," was the good natured reply.

"GENTLEMEN," said a tattered tramp, as he approached a settee in City Hall Park which was entirely occupied. "I am very tired. Will one of you be kind enough to get up and give me a seat?" No one moved but all gazed at the impudent rascal with stony stare. "Gentlemen," pleaded the vagrant, "you have no idea how tired I am. I left Montreal—" Suddenly the seven men on the settee with one accord jumped up and fled, without looking around. "Yes," said the tramp, as he stretched himself out at full length on the bench. "I left Montreal when war a boy."

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The Rural Canadian.

TORONTO, NOVEMBER, 1885.

"THE RURAL CANADIAN" AT GREATLY REDUCED RATES.

We are nearing the close of another year. Soon our subscribers will be deciding on their papers for 1886. The publisher of THE RURAL CANADIAN hopes to retain the names of all old subscribers, as well as to add thousands of new names. With this object in view, the following favourable club offers are made:

CLUBBING RATES FOR 1886.

Club of four names (75 cents each), \$3, and free copy to sender; club of ten names (60 cents each), \$6, and free copy to sender. For larger clubs special rates given on application. And if any person wishes to make a canvass of a township for THE RURAL a good commission will be allowed.

THE RURAL CANADIAN for 1886 will be greatly improved in many ways. At the suggestion of valued friends, who have said that the present page is too large for binding, the size of the page will be reduced, while the number will be considerably increased, thus insuring the usual quantity of reading matter. It is scarcely necessary to add that the various departments of the paper, which have given so much satisfaction in the past, will be maintained, and new features will be introduced.

We ask our friends to aid in extending the already large circulation of THE RURAL CANADIAN. Say a good word for the paper to your neighbours. Ask them to subscribe. Send us a club of four, and secure a free copy for yourself. We also offer book premiums, which are well worth looking at. Good books are valuable aids to the farmer; and our offer affords an easy way to make additions to the library. Try.

THE CONTAGIOUS DISEASES ACT.

Fortunately there has been little cause for complaint in this Province of the want of legislation dealing with contagious disease in animals. Our flocks and herds have been singularly free from epidemic ailments of a serious character, and the rate of mortality among them is low. In European countries and in parts of the United States contagious or infectious diseases of one kind or another are almost of yearly occurrence, and the loss of animal life is sometimes computed by millions of dollars. There are localities in the United States where pleuro-pneumonia breaks out from time to time, apparently defying the efforts of science and legislation to stamp it out. One result of this is that cattle shipped from the United States cannot be forwarded alive to the English markets, but must be killed at the port of landing. Canadian cattle, on the other hand may be delivered at any market in the British Islands, and may be held over for any length of time awaiting good sales. This is a material advantage to possess, for, owing to the fluctuation of prices it may happen that the day a cargo is landed there is a glut of beef in the market, and the shipper who cannot hold over has no choice

but to sell at what price he can get. For this reason Canadian dealers are deeply interested in keeping up a clean bill of health in the country, and they are well seconded both by the people and by the Government.

We have had for a number of years a good measure on the statute books of the Dominion, and during last session some amendments were made to it which must still further increase its efficiency. But the provisions of this measure appear to be almost unknown to our farmers, not having hitherto had occasion to study them. It is only now, upon the outbreak of the hog cholera in one or two centres, that any attention is given to the subject, and even now it is doubtful if many people know what risks they incur for failing to comply with the requirements of the law. It is certain that in the county of Essex farmers have been very remiss in their duty, so far as this disease is concerned, and that its rapid spread throughout three or four townships is largely due to the neglect of reasonable precaution. The report made several weeks ago by Dr. Grenside, of the Agricultural College, at the request of the Ontario Commissioner of Agriculture, and the more recent inquiry made by Dr. Wilson, of London, under instructions from the Dominion Minister of Agriculture, reveal a degree of carelessness; that is little short of criminal. The latter gentleman states, as reported in one of the daily papers, that farmers had no hesitation in selling pigs from diseased herds for shipment to markets in different parts of the Province, and that in a number of instances the animals died of the plague before reaching the places to which they were shipped by railway. It is further stated that diseased pigs have been allowed to run at large on the streets and on commons, thereby spreading the plague from farm to farm, and that dealers in store hogs had no hesitation in going into the infected districts to buy up stocks for sale to feeders on farms only a few miles away. By such means as these the plague has spread far and wide over the townships of Anderdon, Malden and the two Colchesters, in Essex, and the result is that many farmers have sustained serious losses. This county, we may observe, is the largest pork-producing county of the Province. Its corn fields are as productive as those of Illinois, and the main object for which the corn is grown is to pack it into pork. There are many Essex farmers, we are told, who fatten thirty to fifty hogs in the fall of the year, and some a hundred or more. Consequently it is a serious matter to those people, either when the corn crop fails or when disease breaks out among their herds, and any measures which can be taken to protect them against loss should be heartily approved. Every man should feel it to be his duty to observe the law in his own case, and, if necessary, to enforce its provisions upon others. And in order that the law may become known, we present to readers of THE RURAL CANADIAN the following synopsis of it:

1. "Contagious" means communicable by contact or inoculation, and "infectious" by any means; and "infectious or contagious disease" includes glanders, farcy, mange, pleuro-pneumonia, foot and mouth disease, anthrax, rinderpest, tuberculosis, splenic fever, seat, hog cholera, hydrophobia and variola ovina.

2. Every owner, breeder or dealer is required to give immediate notice to the Minister of Agriculture at Ottawa, on perceiving the appearance of infectious or contagious disease among the animals owned by him.

3. Neglect to make such report to the Minister forfeits claim to compensation for any animals slaughtered in accordance with the provisions of the Act, and for fraudulent concealment of the existence of contagious disease among animals the person is subject to a penalty not exceeding \$200.

4. A like penalty is provided in the case of a

person who turns out or grazes on any common, roadside or unenclosed land an animal known to be infected, or known to have been exposed to infection or contagion of any sort; or who brings or attempts to bring such animal to any market or fair; or who sells, or puts off, or offers for sale any infected animal or any part of an animal known by him to have been infected at the time of its death; or who throws the carcass of such animal into any river or other water; and for digging up any such carcass without lawful authority or excuse, a person incurs a penalty not exceeding \$100.

5. Any infected animal that is sold or offered for sale in any market-place may be seized and reported to the mayor or reeve, or any justice of the peace, by a policeman or officer of the market, and such animal may be destroyed or otherwise disposed of as the Act provides.

These provisions of the Act have force and effect at all times, and no Order-in-Council or of the Minister of Agriculture is required to put them in motion. There are other sections, however, which can only be brought into operation upon the authority of the Governor-in-Council or of the Minister, among which are the following:

6. The Governor-in-Council may cause to be slaughtered animals suffering from infectious or contagious disease, or animals which have been in contact with or near to a diseased animal, or to an animal suspected of being affected by such disease.

7. When the Minister reports owners not guilty of any negligence or offence against the provisions of the Act, the Governor-in-Council may order a limited compensation to be paid such persons for animals slaughtered as above, the provisions being that—

"Whenever the animal slaughtered was affected by infectious or contagious disease, the compensation shall be one-third of the value of the animal before it became so affected, but shall not, in any such case, exceed \$20; in every other case the compensation shall be two-thirds of the value of the animal, but shall not in any case of grade animals exceed \$40; and in any case of thoroughbred pedigree animals two-thirds of the value of the animal, not to exceed \$150; and in all such cases the value of the animal shall be determined by the Minister of Agriculture or by some person appointed by him; but if such owners or their representatives have been guilty of an offence against any of the provisions of the preceding sections of this Act, no valuation shall be made, and no compensation shall be paid to them."

The remaining provisions of the Act deal with appointment of officers and define their powers and duties in giving effect to the Act; prescribe the regulations which may be adopted by the Governor in Council; and provide for the due enforcement of the Act by penalties for any offence against its provisions.

We trust, however, that the farmers of Ontario are too intelligent—not to say too keenly alive to their own interests—for an occasion of penalties to enforce the law. We are confident that what they mainly need is to be informed of what the law requires them to do; the reasonableness of it will hardly be disputed by any who consider how largely the interests of all are concerned in the conduct of each. With earnest and united effort the swine plague may be stamped out speedily and effectually; but, if neglected, it may entail a very serious loss upon the country.

RENK early and do not miss a single copy of your paper. THE RURAL for 1886 promises to be far ahead of its past record, good as that has been. Several improvements are contemplated, which will increase the popularity of the paper and add materially to its usefulness.

THE readers of THE RURAL who have not yet remitted for 1885 are reminded that it is about time to do so. The date after the name indicates the time to which payment has been made. We do not wish to strike off a single name, and hope to add many new ones during the next few weeks.

FOR THE RURAL CANADIAN.

WINTERING CALVES.

Mistaken ideas sometimes prevail in the feeding of calves during the first winter by putting them suddenly on dry hay and concentrated food, after being taken of the grass and milk. The change is so sudden that the young constitution receives a check from which it seldom completely recovers till the grass grows again. As well might we expect to transplant a Congo negro to the shores of Greenland, as change the rations from rich, succulent food to dry fodder, with good results. The commencement of winter is the critical time for all stock, particularly young ones. The change of food should be gradual from grass to dry fodder, by feeding a regular ration either of soaked bran or roots until the hard weather sets in, when grain may be safely fed. Well cured clover is excellent fodder; but well cured timothy is the worst kind of feed for calves, unless cut and steeped or steamed. Where timothy is the only hay, it will be better to feed chaff, cut straw, or even whole straw, and some grain, ground or whole; if unground, oats can hardly be beaten.

S. D. G.

FOR THE RURAL CANADIAN.

FALL PLOUGHING.

For the clay districts we have had a specially fine season in October for fall ploughing. Though the land is somewhat stiff, it is dry all the way down to the subsoil, just in the right condition to allow the air to circulate freely below the ploughed. The result will be that land that worked stiff and lumpy last spring will be well subdued before another season. Owing to the late spring many had to go on the ground before it was in proper condition, or be too late for early spring seeding. Now is the time to get it in shape by throwing it up to the action of the air and frost.

BREAKING SOIL.

Though stubble is all right ploughed in the fall when ploughed dry, soil is generally better left till spring, when a few days can always be spared before other ground is fit to work.

After several experiments we have come to this conclusion: The growth of grass is now about over, and what sward is turned over in the dead or dormant state remains over winter without fermenting or rotting, and the summer following will be well advanced before the soil rots and the land be left too open, while the benefit of the overturned soil will be almost lost to the succeeding crop. By leaving it till early spring, vegetation will have fairly started. The soil turned over will start to rot immediately, and furnish abundant nourishment to the crop when, if thistles or foul weeds are present, they will not have time to start before the crop will be up to smother them out, especially if oats or some luxuriant crop be sown. Even if roots are to follow, spring ploughing will give much better satisfaction.

W. F. P.

TO CLEAN WHEAT.

Those who have not the convenience of a complete set of screens, or one of the improved fanning mills, can make a tolerably good job in cleaning out oats, chess and light grain by taking out all the sieves except the long screen, drawing down the chess board to within about four inches of the end of the shoe, put on light shake, light feed and moderately heavy wind, when chess, oats and light grain will blow over.

S. D. G.

PROFESSOR BINZ finds that coffee is an absolute antidote to alcohol, if it be taken in a sufficient quantity. Dogs saturated with caffeine could not be made drunk.

THE MANURE HEAP.

Upon farms that have been long under cultivation, the use of manure is an absolute necessity, if large crops are to be secured or the fertility of the land is to be maintained. The few exceptions to this rule are found in fields which are periodically overflowed. The farmer whose land is not of this description, and who uses but little manure, will never be troubled for a place in which to store his fruits and goods. He will not have to pull down his barns and build greater, though he may think it best to remove part of them because he has nothing with which to fill so many.

Manure is one of the things of which a farmer can never have too much. The more he uses, the better his crops will be, and the broader becomes the foundation which he lays for permanent prosperity.

Now, it is a sound business principle that a man ought not to purchase anything which he can as cheaply furnish at home. Yet there are many farmers who are not careful to make and save manure, and who pay a great deal of money for fertilizers which they purchase to make up the deficiency caused by their own neglect. In doing this, they are much wiser than those who pay little attention to the home supply, and never buy from abroad. There is, however, a far better way than either of these classes pursue. The rule should be to make all possible home supplies available, and then purchase what may be needed.

While too much manure cannot be made upon a farm, it is possible to make it too poor. Drawing dirt into the barnyard is a favourite method of increasing the size of the manure heap. During November, or early in December, a multitude of farmers cart out the material which they put into the yard the last year, and haul in a fresh supply. If properly carried out, the plan is a good one; but it is possible to do a great deal of work in this direction, and accomplish very little good. Dirt spread a foot thick over the bottom of a yard in which the cows are kept during the short nights of summer, and the still shorter days of winter, will not become very rich in the elements of which manure is composed. In some cases this material is allowed to remain undisturbed for a full year where it is spread. It was dirt when it was put into the yard, and it is very little better than dirt when it is drawn out. When muck is used in this manner, and is spread on loam or gravel, it sometimes proves beneficial merely in the direction of mixing different kinds of soils; but this end could be secured at less expense by drawing the muck direct to the fields upon which it is to be used.

Probably, the majority of farmers who put dirt into their yards take more pains to make it valuable. Some plough it repeatedly during the summer. Others not only plough it at various times, but late in the summer, or early in the fall, they pile it in the centre of the yard and mix with it a considerable quantity of stable manure and refuse material which can be converted into plant food. This pile is shovelled over once or twice before it is carted to the fields. In this way a manure heap may be considerably enlarged in quantity and increased in value. But care must be taken not to use too large a proportion of dirt.

A better way than this (better, too, than the formation of compost heaps in a more elaborate manner) is to bed the cattle through the winter with dry earth. As the barns are now constructed this plan is not practicable upon all farms. But where there are more stables than are required, or there is a closed shed which is not needed, this method may be tested upon a small scale.

When the earth is used in the stables, it not only becomes thoroughly mixed with the solid excrement, but will also absorb large quantities of the liquid manure which is of great value, and which, with the other methods named, is largely wasted. This plan enables the farmer to obtain a large quantity of manure of very high quality. The dirt used for this purpose should be free from stones, finely pulverized, and thoroughly dried in the sun before being put into the barn for winter use. Straw, hay, or corn-stalks, if cut, may be used in connection with the dirt, if desired; and the value of the manure will be considerably increased by the addition of the organic and mineral matters which they contain.

NOTE both failures and successes and report them for the benefit of others.

THE cost of the European armies, even on a peace footing, averages about \$3 a year for each inhabitant.

A SERIES of experiments with light and heavy seeding of wheat, made at the Indiana Agricultural College, seems to have established the fact that the best results may be expected when from five to six pecks of winter wheat are used per acre when sown broadcast.

GIVE to the cows none but the best and purest food. With no other stock is this so essential, for the reason that it has been demonstrated by competent authority that milk is a very prolific source of transmitting disease germs from impure food, and especially from impure water.

THE rain, accompanied by the heat, has caused pretty general rotting in potatoes in rich clay land in Western Ontario. Had we had a dry, cool September, the largest and best crop ever turned out would have been gathered. Our old and heaviest cropper, the Late Rose, has suffered most; Granger, least; White Elephant, pretty safe; Beauty of Holton, middling safe.

NOW is the time to secure and begin to feed oyster shells to your hens. Get the shells wherever you can most conveniently, enough to fill a box or barrel. Break up in small places near the feeding place, about a pound a day for every twenty or twenty-five hens. Make the pieces small enough for the hens to swallow. They will eat the amount clean every day, and it will furnish lime for the shells of their eggs. It is a small chore, but it will pay.

LARKIN LEONARD, a remarkable old gentleman, died in Franklin County, N. C., recently, at the age of eighty four. He never bought a pound of meat, a barrel of flour or corn, did not owe a dollar when he died, never wore spectacles, could read, had a good set of teeth, never saw a railroad, had a sow twenty-seven years old, never swapped horses, never was out of honey, nor corn, wore one pair of shoes thirteen years, kept one pair of plough lines nineteen years, and never moved from the place where he settled when a young man.

MR. J. B. MASON thus describes his visit to the apiary of J. E. Pond, Jr., Foxboro, Mass.: "He has a large law practice and keeps bees only as a means of recreative exercise, and from a deep love of the occupation. He is one of the most enthusiastic bee-keepers I have ever met, and at the same time is thoroughly posted in apiculture as well as in law. He has kept as many as fifty or sixty colonies at a time, although he has but seven at the present time. He is a hard student in entomology, and often sacrifices a colony for the purpose of proving or disproving a principle. The condition of his apiary proved to me that he knew how to take care of it. He wintered his bees on the summer stands.

Bees and Honey.



OFFICERS OF ONTARIO BEE-KEEPERS' ASSOCIATION, 1885-6.

President, S. T. Pettit, Belmont; 1st Vice-President, Allen Pringle, Selby; 2nd Vice-President, Mrs R. Mc Keechie, Angus; Secy. Treas. Wm. Couss, Meadowdale.
EXECUTIVE COMMITTEE—D. A. Jones, Beeton; S. Cornell, Lindsay; Jacob Spence, Toronto, Jr. Thom, Streetsville, R. McKnight, Owen Sound.

The following report explains itself. It places us in a much better position than assigning *The Rural* to the organship of the Association could possibly do. No efforts shall be spared on our part to give the members of the Ontario Bee-Keepers' Association an interesting and useful department in *The Rural*.

We, the committee appointed by the President of the Ontario Bee-Keepers' Association, beg to report that we recommend the abolishing of the title of "organ" of the Association in connection with any periodical; and that the arrangement heretofore existing with the publisher of *The Rural Canadian* be continued, and that each member on paying his fee be furnished with *The Rural Canadian* for one year free.

We also beg to recommend that the officers of the Association be relieved of the responsibility of furnishing "copy" for *The Rural Canadian*, and that the publisher of the paper be held responsible for the proper management of the department devoted to bee culture.

J. C. THOM,
JACOB SPENCE, } Committee
S. CORNELL,

October 12, 1885.

WINTERING BEES.

Again this, the most difficult problem in bee-culture, is the duty of the hour. By the time the November number of *The Rural Canadian* reaches its readers the last moment will have come to which final preparations for wintering can be safely delayed. It is not, therefore, too late for some suggestions to be made on the subject.

Whatever method of wintering is adopted, it is to be presumed that there is a sufficiency of stores and an adequate number of bees, with a queen, in each colony. Then the question of winter quarters must be decided. Shall our stocks be put into a cellar, bee house, clamp, or duly protected on their summer stands? Each of these plans has its advocates, and with due precaution bees may be safely wintered in either way. We confess to a strong preference for out-door wintering. The air in cellars, bee houses and clamps is apt to be impure and unwholesome. Bees may and do survive in spite of this disadvantage. But they are more likely to be healthy and vigorous if supplied with fresh air of the purest quality. Then, there is much needless and arduous labour involved in carrying bees into and out of these quarters. It is also difficult to hit the proper time for these operations. Again, colonies vary in strength, so that the ventilation and temperature suited to one is unsuited to another. Moreover, aged bees are constantly dying at intervals during winter. Whether they drop on the bottom-boards, or, these being removed, fall on the tier of hives below them, and on the cellar floor, they are apt to emit a foul odour and become a cause of disease. There is reason to believe that not a few bees are lost in the effort to remove dead ones from the hive. In the total darkness they cannot find their way back from

the funeral of their dead comrades. A final objection to wintering in these places is the liability of the bees to what is known as "spring dwindling" on their removal into the open air.

Those who, notwithstanding these objections, adopt what is called "in-door wintering," cannot do better than follow the advice given by Dr. Thom in his "October Bee Notes," published in the last issue of *The Rural Canadian*. The worthy doctor, however, furnishes another argument against "in-door wintering" by the following bit of counsel: "The owner of a few stocks may, with advantage, remove them from the cellar and give them a fly on any genial day of February or March, remembering to place them on the stands they severally belong to." This is considerable trouble, even if the bee-keeper is "the owner of a few stocks" only. It is desirable to be relieved of all necessity for meddling with one's bees from November until April, and this immunity can be secured by a proper system of out-door wintering.

Double-walled chaff or sawdust packed hives are now largely used for out-door wintering, and will usually be found successful in mild or moderate winters; but, as Dr. Thom well observes in the article already referred to, "Exceptionally severe seasons now and then occur when they prove an insufficient protection." There is another trouble connected with them, which also attaches to the plan of packing with chaff or sawdust described by Dr. Thom. It is that the ordinary entrance is the only inlet for fresh air. This is liable to be partially or wholly obstructed by snow, ice, dead bees and the debris of the hive. To guard against this danger, it is often recommended to go round and clean out the entrances with a bit of crooked wire or narrow hoop-iron. This must be done very often, daily indeed, to be an effectual safeguard against obstruction. It takes much time and trouble properly to attend to this, and if it be neglected for a single day the consequences may be serious, if not fatal. Besides, it is not well to disturb the bees by scratching on the bottom-board and poking at the entrance of the hive every now and then. It is agreed on all hands that they winter best if kept in absolute quietude.

It is very surprising that bee-keepers run the risks they do in depending on the ordinary entrance for ventilation, and take so much trouble in keeping it open, when it is the easiest thing in the world to provide a self-regulating aperture through which the bees will have a uniform and constant supply of fresh, pure air all winter long. It is only necessary to raise the hives eighteen inches or two feet from the ground and bore a two-inch auger hole through the bottom board. If hives were kept on stands about the height just specified all the year round, it would save much back-breaking stooping during the working season, and facilitate the matter of winter ventilation. Whence the present custom of placing hives on or near the surface of the ground originated, it is difficult to say, but it is an irrational and absurd practice. Apart from winter ventilation, for which it furnishes a most convenient opportunity, it is more convenient for the bee-keeper and better for the bees to raise the hives a foot or two from the ground. The expense and trouble for making stands for this purpose amount to a mere bagatelle. Some sort of a stand hives must have or be imbedded in the damp earth, and it is not much to add supports a foot or two in height.

We firmly believe that for perfect ventilation in winter, bees ought to have a vertical air-shaft beneath the brood-nest. By this means there

will be a gentle current of air flowing through the hive on natural principles, which will dispose of moisture, and keep up the necessary circulation. Wild bees in the woods arrange for this in their hollow tree habitat, and it is well-known that hives raised above their bottom boards often prove the very best of winter quarters. Last winter was an exceptionally severe one; but in regard to it Mr B. Lasee, of Cobourg, writes: "Bees wintered last winter in a hive without a bottom board, two inches from the stand, all closed on top. My strongest stock this spring was the most exposed; it stood two feet from the ground, closed perfectly tight all around, in a double-walled hive, with front entrance open full width. A neighbour wintered a stock six feet from the ground safely."

Our own preference is for a box-stand eighteen inches or two feet high, inside of which, and as a substitute for the bottom board during winter, is a hopper, down whose sloping sides dead bees and refuse fall by their own weight to the bottom of the box. The box-stand is tight, and air is admitted through one or more inch auger holes bored through the side or sides. This box-stand is made large enough to admit of setting a rough case over the hive which is packed at the sides and on top with chaff or dry sawdust. Each hive has its own stand, occupying it both summer and winter, so that both ventilation and protection can be arranged according to the strength of the colony.

It is undeniable that bees, properly put up for winter, form a compact cluster and relapse into a state of torpor or, at any rate, quietude. Stillness and repose prevail in the hive. This condition has been called "hibernation," and it certainly is analogous to, if not identical with, the state scientifically known by that name. To secure this, bees must be well protected from the cold, and furnished with a moderate but unailing supply of pure air. Then they pass the winter in "masterly inactivity," consume but little food, and come out in the spring free from disease, with clean combs, vigorous and lively, ready to "increase and multiply" on the advent of mild weather.

While, to a certain extent, this desirable condition of things can be secured, under favourable circumstances, by in-door wintering, we firmly believe that to get "the bee at its best," out-door wintering, as above described, is preferable. On this plan bees, during a warm spell, can take a cleansing flight of their own accord, the summer entrances being left open sufficiently to admit passage to and fro. Aged bees, obeying the instinct of their nature, will leave the hive to die. Being habituated to the outer air, "spring dwindling" is prevented. The bee-keeper is "off duty" all winter, and, like his insect protégés, can "rest and be thankful."

EXHIBITION GRIEVANCES.

The *Canadian Bee Journal* of September 30th contains the following paragraph:

"At London, because the directors could not or would not give sufficient space to bee-keepers, several loads of comb and extracted honey were driven right home again. If the directorate of the Western Fair expect to retain the interests of the bee-keeping fraternity they will find it necessary to use them a little differently, and to endeavour to meet their views in the matter of accommodation. For a certainty we know that their demands on the directors were extremely modest, and should have been acceded to."

A trifling error has crept into the above statement. The blame is attributed to "the Director-

ate of the Western Fair." This is a mistake. It was the Directorate of the Provincial Fair which had the control of arrangements, and the above is only one of many complaints as to bad management at the recent exhibition, so much so that the local papers have joined in a chorus of condemnation, and there seems to be a general wish that the Provincial may not be appointed at London again. The Toronto Industrial is the only one of our great exhibitions at which the honey product is properly appreciated. Usually, honey is dumped in among "Dairy Products," and a solitary prize offered for it along with butter, cheese and bacon. At the recent Guelph Central, there was a prize offered for comb honey only. No notice whatever was taken of the extracted article. Mr. J. R. Morison, a young bee keeper who has recently started the "Royal City Apiary," was obliged to pay the \$1 entry fee for the privilege of making an exhibit of his honey, and was then taxed \$2 for the additional privilege of selling. The sum total, \$3, was quite a percentage to deduct from the small profit on his sales.

Exhibition directors must be made to know that honey and bee-keepers' requisites are as deserving of premiums as a great many other things that figure on their prize lists. Bee-keepers have the matter very much in their own hands. Let them attend the annual meetings of the agricultural societies, and urge the claims of apiculture to more prominent recognition. The conspicuous place assigned to the honey department at the Toronto Industrial Exhibition was mainly obtained by the energetic efforts of Mr. D. A. Jones, and if other producers will go and do likewise, there will be fewer grievances of this kind to complain of hereafter.

FOR THE RURAL CANADIAN.

NOTES FOR NOVEMBER.

BY DR. THOM, STREETSVILLE.

In addition to the two most generally adopted modes of wintering which I gave in detail last month, I will give a third, which often proves successful in sandy or gravelly soils. Some bee-men of experience, indeed, prefer it to either of the methods already given. It is called the clamp method, and consists in burying the bees beyond the reach of frost. A peculiar modification of this has existed in Russia for generations past. There perpendicular pits resembling wells are dug, which they fill in the fall with hives placed one above another, commencing about twenty feet below the surface. After the pit is filled in this manner as far as the frost line, it is covered by a platform perforated by a ventilating shaft, the interval between the platform and the surface of the earth being filled up with straw or leaves, trodden down. There the bees remain undisturbed during the long and severe Russian winter; and the fact that Russia produces a very large amount of wax and honey is sufficient to attest the efficiency of this method of wintering in a severe climate. The mode generally adopted in America, however, is by excavating in sandy loam a trench two feet in depth, and the same in width, and as long as will accommodate the number of hives you wish to bury. Make a drain sufficient to draw off all the water likely to accumulate, fill the clamp one foot in depth with dry leaves or straw well trodden down; place a few boards over this at intervals sufficient to afford a resting-place for the hives; place them in rows close together, giving ventilation by removing either tops or bottoms (if tops cover with cotton quilt). In this mode of wintering I prefer the removal of bottom boards, not only for the purpose of giving the necessary ventilation but also that all dying bees may drop free of the combs and thus prevent the accumulation of a filthy

mass of dead bees among the ranges of comb. Having placed the hives in position, place a saucer or two containing a mixture of equal parts of powdered arsenic, sugar and flour in the trench to destroy any stray vermin that may find their way in. Place boards at a slope from the sides of the clamp to meet over the hives, cover all thoroughly with one foot in depth of straw and one of earth, and the work is done.

You may now leave them to undisturbed repose until the return of the warm settled spring weather. When appearances indicate that we may expect a day or two of sunshine open the clamp at night, disturbing the hives as little as possible, and carry them to the summer stands in the darkness.

If it is objected that no sufficient provision has been made for ventilation to the clamp, one tube may be placed for the purpose in the middle of it, especially if the number of stock buried be large, but beware of creating a draught, this having often proved fatal. Choose a rather cold day toward the end of November for making the clamp.

Bees have consumed this fall an unusually large amount of their winter stores, and many stocks will require feeding. For this purpose the "Canadian Bee-Feeder," made by Mr. D. A. Jones, is certainly the best I have ever used. It makes a light task of what was a disagreeable undertaking with previous appliances.

"NOTES ON THE ONTARIO CONVENTION."

Under the above heading, the *American Bee Journal's* "own correspondent" makes the following remarks in its issue of October 7th:

"In point of attendance the recent Ontario Bee-Keepers' Convention was almost a failure. There was a quorum present at every session, but many were conspicuous by their absence. This may easily be accounted for, without suspecting any decline of interest in apiculture. In the first place, two great exhibitions were in progress during the week in which the convention was held—the Provincial at London, and the Industrial at Toronto. The former lasted but a week, the latter two weeks. Manifestly the bee-keepers should have been called together during the second week of the Toronto Fair. 'Somebody blundered' in fixing on a time when the interest and attendance could not fail to be divided. Then, in the second place, the notice given was insufficient. It was published only in the Canadian bee-paper and in THE RURAL CANADIAN. The officials will do well to 'make a note on't,' and take care that these mistakes are not repeated another year.

"Whatever may have been the shortcomings of the convention, the exhibition of honey and bee-keeping requisites was a brilliant success. To those who saw the show two years ago, when the North American Bee-Keepers' Society met in Toronto, it will be enough to say that the recent display was a far better one than that then witnessed. For the information of others, a few particulars may be given as follows:

"The spacious honey-building was entirely too small for the exhibits. There were complaints that the space at command was not evenly allotted. Be this as it may, it was to be regretted that some were crowded into a corner, who had the wherewith to have occupied large room to excellent advantage. This was especially the case with Mr. J. B. Hall, of Woodstock, our chief producer of comb honey, and, in all respects, a first-class apiarist. He was cooped up in a narrow, inconvenient place, where it was impossible for him to do himself justice. If this could not be helped, it was, to say the least, very unfortunate.

It is with some people at exhibitions as it is aboard railroad cars—they are not willing to divide fairly with their neighbours.

"On entering the honey-building, two gigantic pyramids met the view, made up of different-sized vessels and packages filled with the toothsome delicacy. Along the walls were kegs, large cans and cases, topped off with the smaller and more fanciful parcels down to little tins containing only a couple of mouthfuls of honey. Depending from the ceiling were pictures of the principal honey-producing plants of this and other countries—to the number of about three hundred. Of these over one hundred were entirely different varieties. Several uni comb glass cases were placed here and there to enable visitors to see the bees and their queens. There was a large array of bee-keepers' requisites, including extractors, comb foundation, smokers, perforated zinc, wire-gauze, drone-traps, queen-cages, reversible frames, feeders, veils, and, last but not least, bee-books. Outside, there were hives, bee-tents, winter bee-houses, and various other 'fixins.'

"The prize-list was unusually large and liberal, and the directors of the Industrial Exhibition deserve much praise for the encouragement given to this important industry. Mr. D. A. Jones gained some twenty prizes; Mr. J. B. Hall about half that number; E. L. Good & Co. the same; while the names of D. Ramer, Will Ellis, W. Goodyear, J. F. Ross, Granger & Duke, Jacob Spence and others figured honourably on the list. The judges did their work patiently and faithfully; but some of the prizes should have been adjudged by the test of best results. As examples, may be mentioned: 'Method of securing the largest yield of surplus comb honey'; 'best system of manipulating sections'; 'method of wintering bees out-doors in any kind of hive.' The bee-keepers' diary, cash account and annual stock-taking furnish the proper data for these and similar awards."

The September number contained a paper upon "Care of Extracted Honey," by R. F. Holtermann. A paper with a similar heading appeared a short time before in another periodical. In justice to Mr. Holtermann we state that his paper, having been on file for over two months, was held over for the September number.—Editor, RURAL CANADIAN.

At the recent meeting of the Iowa State Bee-Keepers Association, Dr. Oren explained his mode of wintering. He sets his (L) hives at an angle of forty-five degrees in rows along the cellar, and puts on planks, then another row and so on until the cellar was full. He said the advantages were that it made a deep frame out of a shallow one and when a bee died she would roll out, instead of being carried out by a live healthy bee to perish on the cellar bottom with her dead sister.

Toads are doing considerable damage to California apiaries. A San Francisco paper states that an apiarist, in one of the lower counties of that State, found that his colonies were being decimated by nocturnal visits of large toads. They got upon the alighting-board and there caught the bees as fast as they made an appearance at the hive entrance. These toads were very active early in the morning when the bees first commenced their day's labour. From Alameda County, California, one of our correspondents says that there has been an unusual number of big toads about, and that toward nightfall they would take up their stand at the front of a hive and make "a square meal" on the bees. He has killed all he could see, but adds, "still they come." Hives that are near the ground are the only ones that are molested. The plain moral of this is that hives should be set on stands a foot or two from the ground, so as to baffle the toads.

The Grange Record.

OFFICERS OF THE DOMINION GRANGE.

OFFICE.	NAME.	POST OFFICE.
Worthy Master	Robt. W. McKie	Blenheim, Ont.
Overseer	A. B. Black	Amherst, N. S.
Secretary	Henry G. Gifford	Manila, Ont.
Treasurer	J. P. Bull	Davenport, "
Lecturer	Chas. Moffat	Edge Hill, "
Chaplain	Geo. Lothbridge	Strathburn, "
Steward	Thos. S. McLeod	Dalston, "
Ass't Steward	Wm. Brock	Adelaide, "
Gatekeeper	L. VanCamp	Bowmanville "

LADY OFFICERS.

Ceres	Mrs. G. Lothbridge	Strathburn, Ont.
Pomona	T. S. McLeod	Dalston, "
Flora	C. Moffat	Edge Hill, "
L. A. Steward	E. H. Hilborn	Oxbridge, "

EXECUTIVE COMMITTEE.

Jabel Robinson	Middlemarch, Ont.
Robert Currie	Wingham, "

AUDITORS.

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

OFFICERS OF ONTARIO PROV. GRANGE.

OFFICE.	NAME.	POST OFFICE.
Worthy Master	R. Currie	Wingham.
Overseer	Thos. S. McLeod	Dalston.
Secretary	A. Gifford	Mosford.
Lecturer	D. Kouljdy	Peterboro.
Treasurer	H. Wright	Blenheim.
Chaplain	E. Wright	Banks.
Steward	Thos. Reazin	Cashtown.
Ass't Steward	Wm. Brock	Adelaide.
Gatekeeper	J. P. Palmer	Fenelon Falls.

LADY OFFICERS.

Ceres	Mrs. C. Moffat	Edge Hill.
Pomona	G. Lothbridge	Strathburn.
Flora	E. M. Cryslar	Delhi.
L. A. Steward	J. McClure	Williscroft.

EXECUTIVE COMMITTEE.

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

AUDITORS.

W. H. White, Esq.	Chatham.
S. Bollahey, Esq.	Patsey.

FOR THE RURAL CANADIAN.

A BOUNDEN DUTY.

We are apt to forget a privilege until we lose it, and we do not fully appreciate an advantage so long as it lasts. The farmers of Ontario are deeply indebted to the Grange for the many advantages derived through the instrumentality of the organization, whether they belong to it or not, for whatever benefits farmers as a class must benefit each individual in that class; therefore, when the Grange gets an evil remedied, breaks down a monopoly, bursts a ring, or rectifies an abuse, the benefit comes to all, and all should assist to continue the good work. We should give our best aid to assist those noble fellows who are first in the ranks of common benefactors. We all remember how, when our Government put the duty on imported salt, the manufacturers formed a ring and raised the price of salt from 50 cents to \$1.25 a barrel, when it could be sold at 60 cents with a fair profit, though rings and monopolies never look to fair profits, but only to what they can get from the purchaser. Logic was of no use, the power of wealth and combination, backed by a surplus profit of 108 per cent. on their working capital was to be met only by the united effort of those who needed salt.

The patriots of Ontario saw only one way of meeting the difficulty, and, as we must fight the devil with fire, wealth alone could checkmate wealth. Salt works must be got and salt made for the consumers. The enterprise was begun, salt produced on a large scale with the assurance that not only members of the Grange, but farmers generally, would take stock, and for ever prevent a similar ring being formed in future. How have we supported the enterprise? Poorly, very poorly indeed, in many quarters. There are Granges in some localities where stock should have been taken that now, since the ring has been burst, get all the benefits, yet have done nothing in acknowledgment, and receive these benefits as a matter of course, because other salt works happen to be nearer than Kincardine, because the freight from Kincardine would bring salt to them a few cents higher than they can get

it nearer home; but let the people's salt works stop producing for one season and the ring get welded, then a change would come over the spirit of their dreams. Salt would go up from 60 cents to \$1.25, and land salt from \$2.25 to \$4.50 a ton, although they would pay no freight from Kincardine.

Salt is a necessary article, and will always be in increasing demand for farm purposes as a manurial agent on soils with a clay or lime subsoil particularly. No one who has used salt on land under the proper conditions but must admit that the results obtained were very profitable, in some cases doubling the crop and adding an extra value in one year of what would get five shares of stock all paid up. I will give one instance of an eighteen acre field of fall wheat, one half of which had been manured on the stubble and the other half had to go without. The result was that the unmanured part made a feeble growth both fall and spring, and by the middle of June it presented but a poor outlook for a crop, feeble, thin and discoloured, to all appearance fit only to be ploughed under for fallow; but, by the advice of a neighbour, the farmer sowed two heaped waggon loads of salt on the nine acres. The crop revived, gained in colour and luxuriance until in harvest it was fully equal to the manured part. Several such cases could be cited where salt had been judiciously applied. Salt will pay and must be used more generally in the future if the Ontario farmer continues to grow grain and roots so as to compete with those around him, and experience proves that when the price of salt goes above what we are accustomed to pay, it will not be used on the land—not because it is too dear, but because we do not like to pay more for it than what we know it should cost—unless we can get it at a fair price, and this can be maintained only by keeping the ring open, by coming in and assisting our own works, and adding to the stock list. S. D. G.

FOR THE RURAL CANADIAN.

CARROTS AS A FIELD CROP.

Since your able contributor, "W. F. C.," has been letting the water out of the turnips, (your Middlesex correspondent trying to keep it in them) I shall step into the next drill and select carrots as my favourite, for two or three reasons. First, because they are always a sure crop, as the fly will not eat them, as often happens to both mangolds and turnips. Next, because they form excellent food for both cows and horses, which cannot be said for turnips, as they are almost unfit to feed cows giving milk, unless those who use the milk and butter have dull olfactories. And, thirdly, because carrots will yield more to the acre than either of the others. Indeed it is questionable if any root, except the potato, is equal to the carrot for food for man or beast. Experienced horsemen have put carrots at half the value of oats as feed for horses; for dairy cows carrots are preferable to either of the others, while, for a crop that will take care of itself in a dry season, the carrots will go nearer to meet the farmer's expectation than either of its competitors. It has only one disadvantage of cultivation, and that is that they must be sown at the right time, and require comparatively clean ground, and the work of weeding is slower than in the case of turnips. The width instead of the length of the hoe must be used to get the whole ground occupied; but there is this in their favour, that half an acre of carrots will yield as much as an acre of turnips or mangolds under similar conditions. Turnips claim one advantage, that when land is foul it can be worked oftener and later in the season, nearly answering the purpose of fallowing to kill some small annual weeds; but for a crop

to smother intruders, the carrot will yield to none. Turnips, as food for stall feeding neat cattle, furnish water in much better form to assist digestion than from any other source, and should not be so sweepingly condemned; for the watery part—simple water and its elements—go to make up not only the fat of beef, but the greater volume of the beef and mutton shipped across the Atlantic. The question for us to decide is whether we can get the water in better form from the turnip or something else that will escape the ravages of insect pests. Water and its gases enter very largely into the animal economy, which may account for the vapouring qualities of our nature, which seem to be relieved after a fit of tall talk. Though not a sworn friend to the turnip I never would charge it with robbing the soil of ammonia, nor of impoverishing it, provided the crop was consumed on the farm. The only time that symptoms of escaping ammonia is when turnips are allowed to rot above ground, when not only that but other rank smelling gases pass off in abundance. S. D. G.

THE FARMER AND THE DOCTOR.

The opinion is slowly but surely gaining ground that there is room in the farmer's calling for the use of a high education. We regard it as one of the most hopeful signs of the times. The following, from an English paper, the *Berkhamstead Times*, contrasts the farmer with the doctor:

"Compare the agriculturist with the doctor. They have more in common than you think. Both have to do with life; and with both, accordingly, professional success depends largely on sharp insight into condition, and prompt appreciation of the corresponding treatment. A good doctor would certainly be a good shepherd, a good herdsman, a good farmer, and yet, what a contrast, rather than resemblance, there exists between the two! Compare the farm with the infirmary. In the former (the very home of routine) unquestioned dogma reigns supreme; in the latter, 'prove all things' is the constant rule of conduct. Every patient is an experimental station; the treatment depends, not on listless acquiescence in established rules, but on the closest observation of each separate case. In agriculture, however, we must at length acknowledge, that, as general education grows, the need of investigation, study, proof, is getting gradually recognized. Experimental stations are being advocated. Trial grounds, long well known to seedsmen, who thus test their wares before disposal, are being established in the general agricultural interest. Men of science, who know the essence of things sufficiently for the purpose, as well as their relations to each other, are using their knowledge to ask questions of Nature intelligently, and of many things in farming we can no longer say that they are accepted without proof. The relations of the soil, the seed, the plant; the relations between the food of the animal, and of its produce, whether of meat or milk—all are being investigated. And on the farm, as in the infirmary, we are gradually learning the advantage of proving all things. But until very lately the contrast was complete between the doctor and the farmer—far greater than it ought to have been, considering how much they had in common. The one had fallen into a long-established routine, accepting the dogmas of his predecessors without proof, and muddling on without inquiry. The other, in dissecting-room, and by sick bed, and in hospital, has been 'proving all things,' and growing in power continually. He can now fight disease with confidence. He can remove or fight its causes almost with certainty. In medicine he can treat his patients hopefully; in surgery he can treat them

painlessly. Where, in all this, should we have been, but that there has been a profession which has been constantly obeying the injunction, 'Prove all things'? When agriculturists, too, shall display the same distrust of blind routine, the same hopefulness of the possibilities open to inquiry, the same earnestness in the work of proving all things, we may believe that they, too, will win their way. 'Prove all things; hold fast that which is good,' will justify itself in the experience of the farmer, as it long since has in that of the doctor."

A MOTTO FOR FARMERS.

"Dollars for comforts, but not a cent for luxuries!" is a good home motto for every farmer. The largest, sunniest apartment in every farmhouse should be in daily use by the family, and the most cheerless room should be used for the parlour, which is rarely opened except at funerals and for the meetings of the sewing society. The freshest eggs and the sweetest butter and the earliest fruit should not all be sent to market and a good share of the proceeds invested in bananas, almonds, raisins, coffee and tea. It is bad policy to cut down the shade-trees along the wayside to raise money for the purchase of fashionable parasols for the women folks. It is time misspent for those, who "having eyes see not," to stroll through the grounds of an agricultural fair, with their hands in their pockets and a perverse expression of discontent on their countenances, as they witness on every hand the evidence of a progressive success which they affect to disdain. Soldiers are given the brightest, sharpest and most effective weapons—so every farmer should have the very best machines and implements for the war which he has to wage against vegetable aggressors and insect predators in the field, the orchard and the garden, and every farmer's wife should have every appliance for economizing muscle.—*Ben Perley Poore, in American Cultivator.*

FALL PLOUGHING.

We have but few soils that are not benefited by fall ploughing. A very sandy, porous soil should be kept in as compact condition as possible through the greater part of the year. Winter and spring especially are seasons of washing. A soil that is kept open by cultivation washes much worse than a soil that is left unploughed. The sandy soil can be but little benefited by fall ploughing, even if there were no loss by washing. The object in fall ploughing is to get the action of the frost on the upturned surface of the furrows. A soil that is already loose and open in its composition does not need this disintegrating action of the frost.

Loams, clays, and even some of the better class of sandy loams, are greatly benefited by fall ploughing. Any soil that is at all inclined to pack or become lumpy will be benefited by fall ploughing. This might be a good rule to go by.

These lumps contain much fertility that plants cannot get the benefit of, while at the same time they are an impediment to good cultivation.

Frost is a good fertilizer. It works alike for all, provided it is given an opportunity. Its expansive power throws apart the hardest clods, and renders available the plant food therein contained. It does a work that no implement can do. It renders a raw subsoil thrown up for treatment at its hands fit for the habitation of plants.

Aside from its effects on the soil, fall ploughing has decided advantages. Teams are in better condition, and consequently a better day's work can be done now than in spring. The land is firm, yet moist enough to do good work, when in

spring it will be soft and sticky. Ploughing done in autumn is so much gained for spring, and forehandedness in this particular is often of great value to the farmer.

Ploughing should not be done too early in autumn, for the land will get so grassed over that no amount of cultivation in spring will get it into good condition again. Land ploughed in fall should not be re-ploughed in spring, for by so doing the work done by the frost is of no avail. The depth of ploughing must be governed by the character of the soil to a considerable extent. A deep soil should be ploughed deep. The deeper the cultivation the better the drainage, and deep cultivation is a safeguard against drought as well. Good subsoil should gradually be brought to the surface, until at least eight inches of cultivated soil are obtained. For garden and root crops a still greater depth is desirable. I have cultivated land to the depth of ten or twelve inches for such crops, with the most satisfactory results. Sandy soils and many sandy loam soils grow sandier as you go down—in fact such is almost invariably the case. There is no use trying to deepen such soils. Better confine the fertilizing material and labour to the surface soil, as it will produce much better results.

We must be governed somewhat in the depth of ploughing by the nature of the crop that is to be grown on the land. Lands intended for small grains that root near the surface do not need as great a depth of soil as those that are inclined to run down. For instance, land intended for corn and roots should not be ploughed deeper than that intended for wheat.—*Stockman and Farmer.*

AT HOME.

At Home we keep our treasures, the precious ones of life;
Father Mother, Brother, Sister, Children, Husband, Wife;
At Home we lay foundations for coming good or ill,
And start out on the journey up life's uneven hill,
At Home.

At Home we build heart temples wherein we may enshrine
The altars and the tables where our olive branches twine;
At Home we ask and answer the questionings of fate,
And seek to find the narrow path up to the gate that's
strait, At Home.

At Home we shun the broader way to gates that open wide,
And hold the path of rectitude when opening paths divide;
At Home we trace the chart of Time, with mingled hopes
and fears,
Find pain and pleasure, sun and storm, 'mid treasured
smiles and tears, At Home.

At Home where loved ones gather, the purest joys we know,
While holding closely in embrace our own, for weal or
woe;
At Home we drink of sorrow's cup, when falls affliction's
tear,
And greetings and farewells are said by those we hold
most dear, At Home.

At Home we tire and wander, but though we roam afar,
We keep the range and reckoning of our magnetic star.
At Home, the dearest spot on earth, where deftly and
with zest
We weave life's web to lay it down and seek eternal rest,
At Home.

TREES IN PASTURES AND MEADOWS.

The importance of trees in pastures and meadows is often set forth by writers for agricultural papers. Generally the principal and sometimes the only point urged in favour of the trees is that they furnish grateful and needed shade. It is admitted that this is a valuable service, and that it fully pays for all the expense and trouble of setting and caring for the trees.

But a broader view should be taken of the subject. Other benefits are conferred by trees. They purify the air, check the force of the wind, and, to some extent, temper the climate of the region in which they grow. So much may be said in a general way concerning the trees scattered over a large area of land.

In the various respects noted above, the trees on a single farm prove as beneficial, in proportion to their numbers and the area which they occupy,

as are the more crowded growths of the forest. In addition to these benefits, they add materially to the cash value of the farm. A purchaser will cheerfully pay a higher price for a pasture or meadow that contains a number of fine trees, than he will for one, otherwise as good, which is destitute of such an attraction. He may not be fully conscious of this fact, but if he could see the field with the trees removed, he could at once be aware that it had lost one of its principal charms. The seller, too, would find that the beauty of the landscape had been lessened, the price which the property would command had been considerably diminished, and the difficulty of finding a purchaser had materially increased.

There is still another point which is often overlooked. Trees are not only beneficial while standing; but, when suitable kinds are grown, are valuable when they are cut. The writer knows of farms of moderate size, on each of which several hundred dollars worth of timber and fuel could be gathered from the few clumps and the scattered trees in the meadows and pastures. And these trees have grown without serious, or even apparent, injury to the crops or the land.

There are numberless farms upon which trees might be profitably grown. By the sides of the watercourses, an occasional clump might be placed, while single trees could be scattered over various portions of the farm. In many cases, a sufficient number of trees, of fine variety, can be grown without transplanting. They will spring up themselves and, if properly protected while young, will become thrifty and vigorous. On other farms it will become necessary to plant the trees. This work need take but little time, and will cost but little money. Good trees, but not large ones, should be obtained. The seeds of some varieties, which are rather difficult to transplant, may be planted where the trees are to grow. In this case, it will be necessary to give both protection and cultivation for several years.—*John E. Read, in Farm Journal.*

ARAB HORSE MAXIMS.

Let your colt be domesticated and live with you from his tenderest age, and when a horse he will be simple, docile, faithful, and inured to hardship and fatigue.

If you would have your horse to serve you on the day of trial, if you desire him then to be a horse of truth, make him sober, accustomed to hard work, and inaccessible to fear.

Do not beat your horses, nor speak in a loud tone of voice; do not be angry with them, but kindly reprove their faults; they will do better thereafter, for they understand the language of man and its meaning.

If you have a long day's journey before you, spare your horse at the start; let him frequently walk to recover his wind. Continue this until he has sweated and dried three times, and you may ask of him whatever you please; he will not leave you in a difficulty.

Use your horse as you do your leathern bottle; if you open it gently and gradually you can easily control the water therein; but if you open it suddenly the water escapes at once and nothing remains to quench your thirst.

Never let your horse run up or down a hill if you can avoid it. On the contrary, slacken your pace. Which do you prefer, was asked of a horse, ascent or descent? A curse be on their point of meeting! was the answer.

Make your horse work and work again. Inaction and fat are the great perils of a horse and the main causes of all his vices and diseases.

Observe your horse when he is drinking at a brook. If in bringing down his head he remains square without bending his limbs, he possesses sterling qualities, and all parts of his body are built symmetrically.

Four things he must have broad—front, chest, loins and limbs; four things long—neck, breast, forearm and croup; and four things short—pasterns, back, ears and tail.

HOME CIRCLE.

NUBBINS.

It was just this time of year when he came to us, and the first circus had passed along the day before, and we had all turned out to see it, and this evening we were out in the front yard, father leaning over the gate in his shirt-sleeves smoking his pipe, mother about the length of his shadow from him. The rest of us were acting circus, Tom tying himself into knots in the grapevine arbour, while we girls took turns on the flying trapeze, otherwise the swing. At this moment Tom gave a yell:

"Hi, there, you small boy! No crawling in under the canvas; if you want to see this show, come in at the gate."

We looked, and saw a boy so small that he seemed a mere infant. He was lying on the short grass just outside the garden paling, his little hands clasped together under his head, and his eyes closed; his face was deadly pale and his matted yellow hair uncovered by hat or cap.

We went out and shook him up, but to all our inquiries he only gave brief and incoherent answers, and father said he was too ill to speak; so we took him into the house and mother soon had him in a snug little bed, and after feeding him with a bowl of bread and milk, which he greedily ate with closed eyes, she held a consultation as to what should be done with him.

"It's my belief that he has been starved to death; there isn't a spot on him that hasn't a bruise, and, girls, I think I know where he came from"—here mother became melodramatic and dropped her voice—"he's run away from the circus!"

We had been a haven for stray cats and lost dogs and penniless tramps all our lives, but now a refugee from a circus! We sat up half the night expecting the whole cavalcade would come marching after him, but no one came, and our hero slept till morning.

He did not get up then, he was far too weak, but he smiled feebly at us and kissed Tom's hands—great, awkward, good-natured Tom—who called him "Nubbins," because he was all bones, and sat on the side of the bed, while we crowded round and looked on. Father had questioned the little chap, but not a word would he say, only his big blue eyes filled with tears and his lips trembled. Tom began differently, he plunged right in.

"So you ran away and left the circus folks, did you?" he asked in a matter-of-fact voice. The boy looked at him for a moment, as if terror-stricken, then he gasped:

"Who told you?"

"Oh, a little bird," said Tom. "Say, now, did they beat you when you couldn't ride those horses right?"

"Yes," whimpered the child, "and pinched me black and blue."

"Poor little soul," we chimed in; "were you always with the circus?"

"Born there," he answered, in the most musical voice I ever heard.

"And your father and mother, are they living there, too?"

"Both dead," he said, pitifully, and the tears stood on his yellow lashes, and we cried a little, too, all but Tom, who sniffed and snorted suspiciously, and suggested that we "give the kid a rest."

No circus company put in an appearance, and for months we ceased to read the newspapers, for fear that our daring child equestrian would be advertised in their columns; for we had formed a prodigious attachment for the child phenomenon, and were highly entertained by him in return. He told us fearful and wonderful stories of his

life in the ring, the hardships he endured and the perils he braved, and we drew from him that his mother had been called the Queen of the Arena, and had been thrown from her horse and killed, and his father missed his footing in vaulting, and so came to his death, leaving this one poor child alone. Then he would fondle us one by one, and kiss Tom's big red hands, and make his best public bow.

Yes, he was pretty and winsome, too, was Nubbins.

One night in late summer we were all ranged along the front garden fence getting the salt marshy air as it came drifting in from the sea, when a waggon-load of people drove slowly past. They were a gaunt crowd, a woman with a long wisp of mourning veil fluttering at half mast, a melancholy-eyed man with a stove-pipe hat of a past generation and red necktie, and some little girls in the raw, undeveloped years of early childhood. Nubbins was at the moment balancing on the top line of the fence, his thin arms gyrating like a wind-mill, his face turned up to the sky. The people in the waggon stopped their horses and looked at us intently. Then they all screamed in chorus:

"It's our Sammy!"

Nubbins heard, and jumped off the fence.

"Hallo," he said coolly, "if I ain't found again!"

"Sammy," screamed the woman, "O Sammy, come here! You dear boy! I'd 'most given you up!"

The man came over and tapped Sammy on the head.

"Ain't you ashamed, old fellow, to treat us so? It's just made your ma most sick. Come on home now, and be a good boy."

"Nubbins," we shrieked, "who are these people?"

But Nubbins was climbing into the back of the waggon, and the little girls and the woman overwhelmed him with caresses.

"Been here long?" asked the man, as he drew out a red handkerchief and mopped his face.

We told him Nubbins's own story. He laughed a little and said the boy was "cute," and allowed that the circus story was a good one; he had been used to run away ever since he was "knee high to a grasshopper," his parents said, for this was really Nubbins's father. Sometimes he told one thing and sometimes another, and he usually got back home in a week or two.

"This time," said the tender parent, "I really thought Sammy was gone. He's all the boy we've got, and he has a roving disposition, and he's powerful good company—pays for all he gets in entertaining folks. I'm sure I don't know what we'd do without him," continued the affectionate father.

The last we saw of that thankless Nubbins he was standing up on the waggon seat blowing kisses off the tips of his small, lean fingers, and the mist had got into our eyes so that the little rascal's figure was blurred and indistinct. We tried to forget him as the worst little waif, and the most untruthful that had ever lived; but when we thought it all over we had no doubt but all that stuff about the circus into his foolish head, and as for his forgetting us—well, older people forget, but oh, what a cute child he was! and how entertaining, and how we all did give our hearts to Nubbins!—Mrs. M. L. Rayne, in *Detroit Free Press*.

FOR TIRED HOUSEWIVES.

The human brain needs rest and change. The human mind needs relaxation. The human heart needs pleasant companionship. Deprive them of these requisites, and the result, in nine cases out

of ten, will be insanity. Perhaps you imagine that I mean to frighten you. Why, to tell you the truth, if I could not arouse you to a sense of your condition unless I terrified you a little, I would rather do so than see you an inmate of an insane asylum. You see this to be quite in accordance with the rest of nature's laws. The body cannot subsist on one kind of diet, it must have more or less variety; and behold how plentifully our Creator has provided for this great need in the abundant fruitfulness of earth, air and sea! How soon the palate tires of one article of diet! how soon the body starves when fed upon one thing! Dear friend, I beseech you give this subject your most careful consideration, for I perceive you are killing yourself with the constant strain brought to bear upon body and mind, and unless you consent to relax that strain you will suffer very seriously in consequence.

Your "nervous headaches" are sent perhaps as warnings, which, if heeded, may prove your salvation from more serious trouble. I have found it exceedingly injurious to work during the evening. You have been busy all day with one duty or another; the night has come, you can find no warrant in Scripture for continuing your labours, but you can for resting from them. So let the work-basket remain undisturbed, let the needle rest. You will be all the more skilful with it on the morrow. Spend the evening in reading, conversation, playing interesting games with your children, or in visiting your friends; or, better still, if you feel able, in attending an interesting lecture or concert; then when you retire, you will sleep sweetly and awake refreshed and equal to the performance of the day's duties.

Never eat heartily when "tired to death." Drink a cup of tea and eat a cracker or two, or beat up an egg in half-a-pint of milk, sweeten and flavour to taste and drink it. This will strengthen you and will not make any demands upon your weary stomach or digestive organs. And another thing: Do not rise early in the morning and trot all over the house doing this and seeing to that for hours before you eat anything. Put on the coffee, if you use that beverage, or the tea, if you use that, as soon as possible, and pour yourself out a cup just as soon as it is in condition for drinking, and add whatever light, easy-digested article of food you may like best. This done—and you must eat slowly and at your ease—you will find that you can return to your work and fairly "make things fly."

You will catch yourself singing, perhaps, and when your husband and children come down fresh from their pleasant slumber, they will meet a smiling face and sit down to breakfast, presided over by a cheerful hostess. Force yourself to try this plan once or twice and I know you will be pleased with it. I have the greatest faith in it because I proved it in my own case, and this is true of all the suggestions I have given in this letter.

TO GET RID OF COCKROACHES.

A correspondent writes as follows: "I beg to forward you an easy, clean and certain method of eradicating those loathsome insects from dwelling-houses. A few years ago my house was infested with cockroaches (or 'clocks' as they are called here), and I was recommended to try cucumber peelings as a remedy. I accordingly, immediately before bedtime, strewed those parts of the house most infested with the vermin with the green peel, cut not very thin from the cucumber, and sat up half-an-hour later than usual to watch the effect. Before the expiration of that time the floor where the peel lay was completely covered with cockroaches, so much so that the vegetable could not be seen, so voraciously were they en-

gaged in sucking the poisonous moisture from it. I adopted the same plan the following night, but my visitors were not nearly so numerous—I should think not more than a fourth of the previous night. On the third night I did not discover one; but, anxious to ascertain whether the house was quite clear of them, I examined the peel after I had laid it down about half-an-hour, and perceived that it was covered with myriads of minute cockroaches about the size of a flea. I therefore allowed the peel to remain till morning, and from that moment I have not seen a cockroach in the house. It is a very old building, and I can assure you the above remedy only requires to be persevered in for three or four nights to completely eradicate the pest. Of course it should be fresh cucumber peel every night.

A MOTHER'S TACT.

The mother was sewing busily, and Josie, sitting on the carpet beside her, and provided with doll, rounded scissors and some old magazines, was just as busily cutting out pictures.

"It would litter the carpet," so said Aunt Martha, who had come in for a cosy chat. Mamma knew this, but she knew that a few minutes' work would make all right again, and Josie was happy.

All went well until the little boy found that he had cut off the leg of a horse that he had considered a marvel of beauty. It was a real disappointment and grief to the little one.

"Mamma, see!" and, half-crying, he held it up.

"Play he's holding up one foot," the mother said, quickly.

"Do real horses, mamma?"

"Oh yes, sometimes."

"I will," and sunshine chased away the cloud that in another minute would have rained down.

It was a little thing, the mother's answer; but the quick sympathy, the ready tact, made all right. The boy's heart was comforted, and he went on with no jar on the nerves or temper, and auntie's call lost none of its pleasantness.

"I am tired cutting pieces, mamma," said Josie, after a while.

"Well, get your horse and waggon and play those bits of paper are wood, and you are going to bring me a load. Draw it over to that corner by the fire and put them into the kindling box; play that's the woodhouse."

Pleased and proud, the little teamster drew load after load till the papers were all picked up, without his ever thinking that he was doing anything but play.—*Christian World.*

REMARKABLE DOGS.

Get Holland's translation of the worthy Pliny if you want an afternoon's amusement. He will tell you that, if you cut off the tip of a dog's tail within forty days from its birth, it will never go mad, and that the best of the litter is the whelp which gets its eyesight last, or that which the mother carries first into her kennel. Of the dog's faithfulness he has notable instances. It has been known to throw itself into the flames when its master's funeral pyre was kindled. It will breed with the tiger. The Indians cross their dogs in that way. The first and second crosses are too savage; the third can be trained. No matter how fierce a dog is it will never attack you if you sit down—Homer says the same thing in the "Odyssey"—and it may be silenced by holding to it a brand snatched from a funeral pyre. When cremation was given up, this recipe had to be modified; and for the brand was substituted "the hand of glory," which credulous mediæval burglars used to carry, with the view of keeping the watchdog quiet. The most fighting breed was the Molossian, a splendid sample of which

the King of Albania gave to Alexander the Great when he was going to India. Alexander had boars, stags, and bears slipped to it, but the dog lay motionless; whereat the King's anger was roused that such a noble form should cover so sluggish a spirit, and he bade the dog be killed, sending a message to the giver that the gift had proved unworthy of them both. Whereupon another like dog was sent, with the warning that the first dog's inaction in presence of small game was not due to sluggishness but to contempt, such dogs being used to be matched against elephants and lions. Alexander at once tried him with a lion, which he slew, and then set him at an elephant, round which he circled, baying loudly, and with all his bristles erect, attacking first on one side and then on the other, slipping in and avoiding the elephant's stroke whenever he got the chance. At last the elephant grew dizzy, and, falling down, was made a prey by its small-sized antagonist.—*All the Year Round.*

THE OLD DINNER HORN.

I've heard many a strain that hath thrilled me with joy,
But none, I will say, since the day I was born,
Has pleased me so much as when, a small boy,
I heard on the farm the old dinner horn.

The trumpet was tin, a yard or so long,
And was blown for "the boys" at noon and at morn;
The monotone strain was piercing and strong,
But sweet, for all that, was the old dinner horn.

When building the fence or tossing the hay,
Or reaping the grain or ploughing the corn,
With appetite keen, at the noon of the day,
Oh! sweet to my soul was the old dinner horn.

A mother's fond lips pressed the trumpet of tin,
And blew her full soul through the barley and corn,
Oh! I hear even yet the "Welcome, come in,
Come in, my dear boys, to the sound of the horn."

Those lips are now still, and the bosom is cold,
Which sent to us boys the blast of the horn;
She is waiting in sleep beneath the dark mould,
The archangel's trump and eternity's morn.

We like to see the old poetic gems going the rounds of the newspapers. Here is one written in the flush of its author's youth, one which ardent swains were wont to repeat to tender maids, in the glow of the moonlight, twenty years ago. It is the "F. bras Carinyosas," of Thomas Bailey Aldrich, and is as follows:

Good-night! I have to say good-night
To such a host of peerless things!
Good-night unto that fragile hand
All queenly with its weight of rings,
Good-night to fond uplifted eyes,
Good-night to chestnut braids of hair,
Good-night unto the perfect mouth
And all the sweetness nestled there!
The snowy hand detains me—then
I'll have to say good-night again.

But there will come a time, my love!
When, if I read our stars aright,
I shall not linger by this porch
With my adieux. Till then, good-night!
You wish the time were now? And I,
You do not blush to wish it so?
You would have blushed yourself to death
To own so much a year ago.
What! both these snowy hands? Ah! then
I'll have to say good-night again.

In the older editions of Mr. Aldrich's poems, the third line read:

Good-night unto that perfect hand,

and the fifth line read:

Good-night to fond delicious eyes.

The changes are undoubtedly for the better.

SLEEPING-ROOM DRAPERIES AND CARPETS.

Bearing in mind the danger from foul air, we should exercise care in excluding from our bedrooms all hangings or curtains of woollen or thick cotton materials, as especially liable to retain dirt and disease germs, and in this category I would include carpets made of woollen or cotton. Hard-wood floors, oil cloth, straw matting, in the order named, are certainly the best mater-

ials for use, if we study simply health. If, for other reasons, we wish the warmth and diminution of noise procured by using woollen or cotton carpets, lay over the first material rugs that can be readily removed and cleansed outside of the room. Linen shades to exclude or mitigate the light at the windows, with lace or muslin curtains for æsthetic effect, are all that is allowable in a bedroom.

Of equal importance is the proper care of the bed and bedding. Bedsteads are usually made of wood. Metal is in every way preferable. A wrought-iron or brass bedstead properly constructed; that is of light weight, mounted on castors, so as to be easily moved and readily cleaned, meets every demand. Especially should we seek one readily moved, if we would have it and its surroundings properly cared for by servants. No articles of whatever kind should be kept under the bed. To prevent this, dispense with "valances" and tuck in the bed-clothes. Curtains about the bed are simply filters, sure to catch and retain the impurities as the air from the lungs passes through them.

The mattress should be made of elastic material, not giving way too freely to the weight of the body. Horse hair furnishes the best material; cotton, wool or feathers, the poorest substitute. A well-made hair mattress, resting on a woven wire spring mattress, leaves nothing to be desired hygienically. Hair pillows are preferable to feather pillows where we desire to prevent heating the head. Linen is the better material for sheets and pillow cases, having less power of absorption than cotton. Blankets should be all wool and of the best quality attainable, as in this way we obtain a minimum of weight. For the same reasons cotton comfortables are not desirable.—*Dr. S. W. Bowles, in Good Housekeeping.*

KITCHEN WRINKLES.

Tomatoes are nice with cream and sugar. Sugar loses part of its strength by boiling. Never wash raisins; wipe them with a dry cloth. Wet and flour well the inside of pudding bags. Wrap fruit jars with paper to keep out the light. Sugar should be browned in a dry pan for sauce. Figs are good boiled five minutes and served hot. Boil coffee in a salt sack; it is nicer than egg to settle it.

Keep preserves in a dry place; seal with flour paste.

Put soda in sour fruit for pies and they will require less sugar.

After paring fruit drop it in cold water to prevent it changing colour.

A little sulphate of potassa added to preserves prevents fermentation.

When sauce boils from the side of the pan the flour or corn starch is done.

Glaze the bottom crust of fruit pies with white of egg and they will not be soggy.

Always put a little soda in milk that is to be boiled, as an acid is formed by boiling.

Do not boil vinegar for pickles. Boil the vegetables in salt and water, drain and pour the vinegar on.

Seal the juice left from canning fruits in small bottles and keep for making fruit pudding sauces.

For convenience in cleaning lamp chimneys, nothing is nicer than a small sponge attached to the end of a stick.

CUSTOMER (in grocery store): You have been established in business a long time, I understand, Mr. Shortweight? Mr. Shortweight (with pride): Yes, sir. I have sold groceries on this corner for twenty-seven years. Customer (lifting the cover of the cheese box and quickly dropping it): Not longer than that?

Good-Bye, Katie Darling.

S. D. W. MENNEILEY.

Con Espressione.

1. Good - bye Ka - tie Dar - ling, Our part - ing must be, The
 2. Good - bye Ka - tie Dar - ling, I'll miss your sweet smile, And
 3. I will write you a let - ter From o - ver the sea, And

ship is now rea - dy To cross the deep sea, Cheer up don't be sigh - ing, I
 think of the day When we sat on the stile, It is there that we vowed That our
 tell you the day That I'll sail, love, to thee, I'll look for your dear lov - ing

soon will re - turn, I know you will miss me, For you I will yearn.
 love should be true, So watch for me, dar - ling, I'll come back to you.
 face on the shore, What a bright hap - py fu - ture For us is in store.

CHORUS.

Soprano.

Good-bye Ka - tie Dar - ling, good - bye..... So dry up your tears, don't be sad.....

Alto.

Tenor.

Good-bye Ka - tie Dar - ling, good - bye..... So dry up your tears, don't be sad.....

Bass.

Piano.

....., For on land or on sea, I'll be think-ing of thee, So re-mem-ber your own sail - or lad.....

....., For on land or on sea, I'll be think-ing of thee, So re-mem-ber your own sail - or lad.....

YOUNG CANADA.

THE SOUNDS OF INDUSTRY.

The banging of the hammer,
The whistling of the plane,
The crashing of the busy saw,
The creaking of the crane,
The ringing of the anvil,
The grating of the drill,
The clattering of the turning lathe
The whirling of the mill,
The buzzing of the spindle,
The rattling of the loom,
The puffing of the engine,
The fan's continual boom,
The clipping of the tailor's shears,
The driving of the awl;
These sounds of industry
I love—I love them all.

The clicking of the magic type,
The earnest talk of men,
The toiling of the printing press,
The scratching of the pen,
The tapping of the yard stick,
The tinkling of the scales,
The whistling of the needle
(When no bright check it pales),
The humming of the cooking-range,
The surging of the brew,
The pattering feet of childhood,
The housewife's busy hum,
The buzzing of the scholars,
The teacher's kindly call;
These sounds of active industry
I love—I love them all.

I love the ploughman's whistle,
The reaper's cheerful song,
The driver's oft-repeated shout
Spurring his flock along,
The bustling of the market man
As he hies him to the town,
The hallo from the tree top,
As the ripening fruit comes down,
The busy sound of threshers
As they clear the ripening grain,
The singing of the waggoner
As he passes with his wain,
The kind voice of the dairyman,
The shepherd's gentle call;
These pleasant sounds of industry
I love—I love them all.

A GALLANT THRUSH.

A young Highlander, having set a horse-hair noose in the woods, was delighted one morning to find a female song-thrush entangled therein. He carried home his prize, put it into a roomy, open-braided basket, secured the lid with much string and many knots, and then hung the extemporized cage upon a nail near the open window. In the afternoon the parish minister was called in by the boy's mother, who wished him to persuade her son to set the captive free. While the clergyman was examining the bird through the basket, his attention was called to another thrush perched on a branch opposite the window.

"Yes!" exclaimed the boy, "and it followed me home all the way from the woods."

It was the captive's mate, which, having faithfully followed his partner to her prison, had perched himself where he might see her, and she hear the sad, broken notes that chirped his grief.

The clergyman hung the basket against the eave of the cottage, and then the two retired to watch what might happen. In a few minutes the captive whispered a chirp in answer to her mate's complaints. His joy was unbounded. Springing to the topmost spray of the tree, he trilled out two or three exultant notes, and then alighted on the basket lid, through the hole in which the captive had thrust her head and neck. Then followed a touching scene. The male bird, after billing and cooing with the captive, dressing her feathers and stroking her neck, all the while fluttering his wings, and crooning an under-song of encouragement, suddenly assumed another attitude. Gathering up his wings, he erected himself, and began to peck and pull away at the edges of the hole in the basket lid. The bird's ardent affection, and his effort to release his mate, touched clergyman, mother and boy.

"I'll let the bird go!" said the latter, in a

sympathetic voice, as he saw his mother wiping her eyes with her apron.

The basket was carried to the spot where the bird had been snared. The cook thrush followed, sweeping occasionally close past the boy carrying the basket, and chirping abrupt notes, as if assuring his mate that he was still near her. On arriving at the snare the clergyman began untying the many intricate knots which secured the lid, while the cock bird, perched on a hazel bough, not six feet away, watched, silently and motionless, the process of liberation. As soon as the basket-lid was raised the female thrush dashed out, with a scream of terror and joy, while the male followed like an arrow shot from a bow, and both disappeared behind a clump of birch trees. It was an excellent lesson for the boy, one which he never forgot.

FAVOURITE NAMES FOR GIRLS.

What are the favourite names for girls—apart, of course, from the acknowledged supremacy of Mary? This has long been a disputed question, and there is now, perhaps, no way of settling it but by going deliberately into statistics. Such an opportunity is given in the long list of names printed of graduates and distinguished pupils of the Normal School. We have had the curiosity to analyze this list of 300, and disregarding pet and diminutive names on principle, and throwing aside initials of necessity, we extract these fairly trustworthy figures, of cases where names are favoured to the extent of five each or upward. Mary leads off with 30, but she is rather closely pressed by Anna, with 27, Elizabeth is third with 24, and Laura is good fourth with 16, Margaret 13 and Katherine 12, are the only double figures. Then in order come these choices of names—Helen, 9; Emma, 8; Lillian, 8; Clara, 7; Jane, 7; Louisa, 6; Alice, 6; Caroline, 5; Emily, 5; Harriet, 5; Florence, 5. So apt are people to go in droves that it is quite likely these proportions would hold in 3,000 names, or in any other number, as well as in 300.—*Philadelphia Telegram.*

WHY HE CHOSE RALPH.

"That Ralph Risley was always a lucky dog!" said Walter, savagely. "There's no reason in the world why I shouldn't have got that place, as well as he—I can't understand it!"

The two boys had applied for a desirable situation, and Ralph had been the favoured one. As the gentleman who engaged him was a friend of mine, I had enough curiosity to go to him and say:

"Will you tell me why you chose Ralph Risley instead of Walter Garret for that vacant situation?"

"Certainly," said he at once. "I confess I should have been puzzled to choose between them but for one thing, for they are both fine fellows, of good family, good scholarship and good habits, but I spent an evening at Mr. Garret's not long since, and soon after I came in Mrs. Garret said:

"Walter, we shall need more coal for the grate soon—you'd better get it now."

"Yes'm," said Walter, but he went on reading and never stirred.

"In about half-an-hour the last of the coal was used.

"Walter," said his father, "why don't you fill the scuttle, as your mother told you?"

"I will in a minute—just want to finish this page," he returned, hurriedly.

Our conversation continued, Walter's reading continued and the fire burned low.

"Walter," said his mother, sharply, at last, "get some coal this minute."

"With an angry frown he slowly rose, reading all the time, laid his book on the table, still open,

and loitered by it until another sharp 'Walter!' from his father at length started him.

"A week later, Mrs. Risley and Ralph were at our home for a call. He had just become wonderfully interested in the bean-bag game with my girls, when his mother rose and said, 'Come, my son, I'm sorry to hurry you, but I don't like to leave the children any longer, Kate is so careless.'

"Instantly Ralph's bean-bag was dropped, and with an 'All right, mother, if the girls will excuse me,' he stood cheerfully ready at her side. We merchants know that 'straws show which way the wind blows,' and learn to be quick at observing. Nothing annoys us like a laggard, and nothing makes business relations so pleasant and satisfactory as courteous treatment on one side, and prompt, cheerful obedience on the other. I knew Ralph would suit me, and I haven't been disappointed."

SCRAP-BOOK.

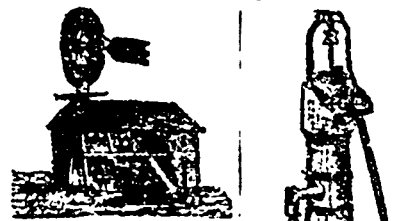
Every farmer who takes an agricultural paper—and every farmer, who reasonably expects to make his farm a success, ought to take two or three, and he will find even more than this a profitable investment—ought to have at least one good scrap-book. I find it profitable to have three. I have one for "The Garden and Fruits," another for "Stock," another for the "General Farm." I divide into different departments, so as to have all articles on one subject as near together as possible. That is, in my stock-book I have so many pages for horses, so many for sheep, so many for hogs, cows and poultry. And the other two as kept are made on the same plan. Of course every reading farmer knows that a great deal of what he reads he can practise, and learns without being obliged to keep the articles to refer to. These, of course, it is not necessary to save, while, again, there are other articles that it is necessary to keep for future reference.

You must either file away the paper and be obliged afterwards to hunt through a number of copies in order to find what you want, or else cut them out and save them in such a manner as they can be most readily found.

In my experience nothing is as convenient as a good scrap-book. I prefer a size wide enough to paste two columns of common newspaper width, having a margin on the inside which would make a book six inches wide. If an old book is used, at least one-half of the leaves must be taken out or the book will be too bulky. I use common paste made of a tablespoonful of flour, a teaspoonful of salt, adding sufficient cold water to stir up well. Put these in a pint cup and then fill up with hot water. It should be allowed to cook until it thickens and turns a bluish colour. I prefer this to mucilage. The leaves, of course, must be thoroughly dried after pasting in the articles, before closing up tight. This drying can be hastened by putting two or three small sticks between the leaves where the articles have been pasted in; and will also prevent the leaves sticking together before they are well dried. By having different books so divided that any department can be found at a minute's notice, the greatest part of the index work can be avoided, or done away with altogether, while if the articles are cut out and pasted in indiscriminately, an index becomes a necessity, as it would be almost as serious a task to find an article in the scrap-book as it would be in the paper. A scrap-book can be made with little trouble and is a constant source of pleasure and valuable information.

If you were willing to be as pleasant and as anxious to please in your own home as you are in the company of your neighbours, you would have the happiest home in the world.

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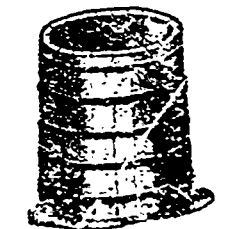


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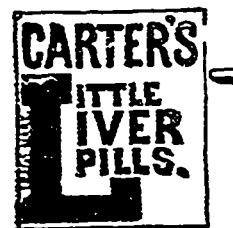
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ACHE

Also they would be almost precious to those who suffer from the distressing complaint, but fortunately their goodness does not end there, and those who once try them will find them the best remedy for so many ills that they will be willing to do without them. But after a sick head.

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Is the base of so many ills that here is where we make our great boast. Our pills cure a whole others do not. Carter's Little Liver Pills are very small and very easy to take. One or two pills makes dose. They are strictly vegetable and do not grip or purge, but by their gentle action purify and soothe the bowels. In vials at 25 cents, five for \$1. Sold by druggists everywhere, or sent by mail.

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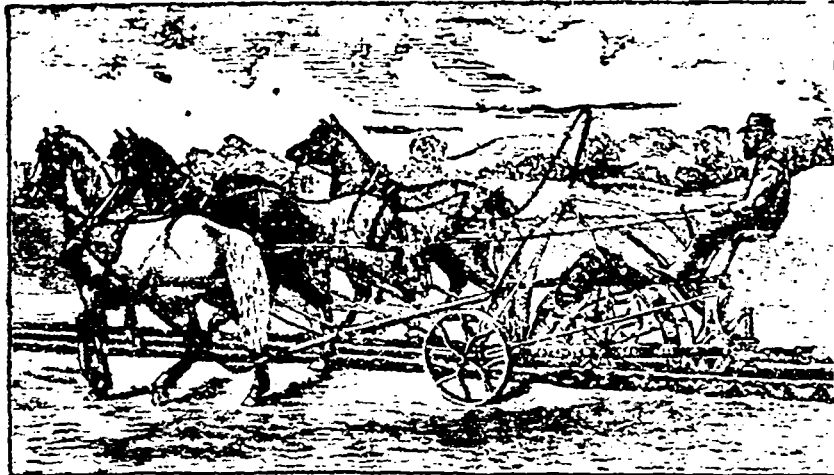
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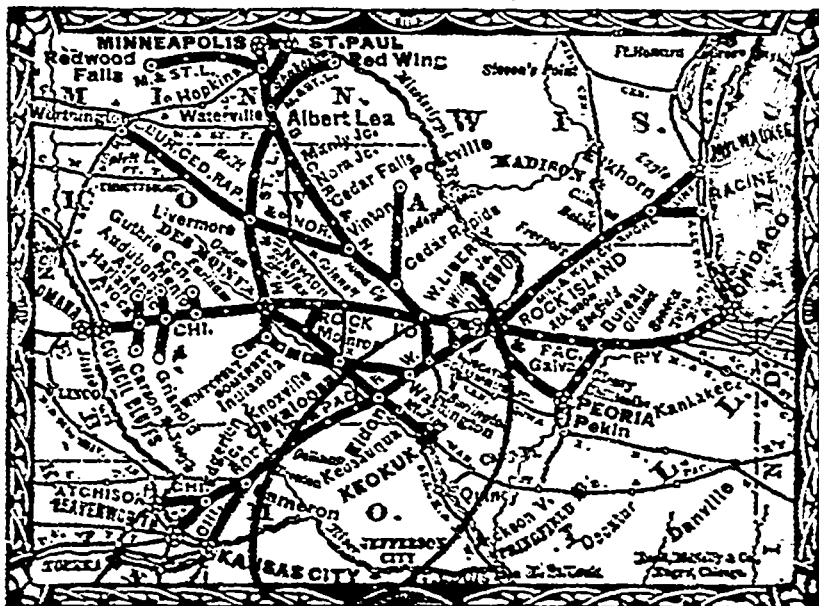


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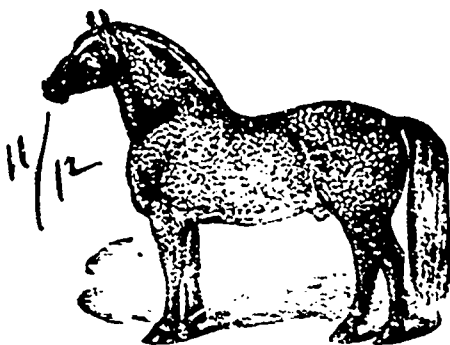
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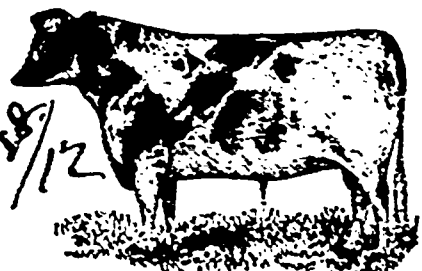
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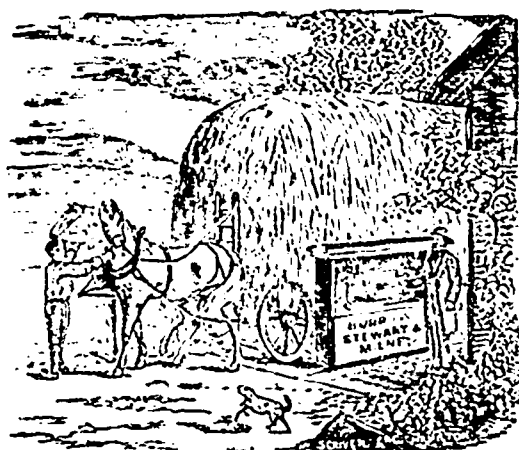
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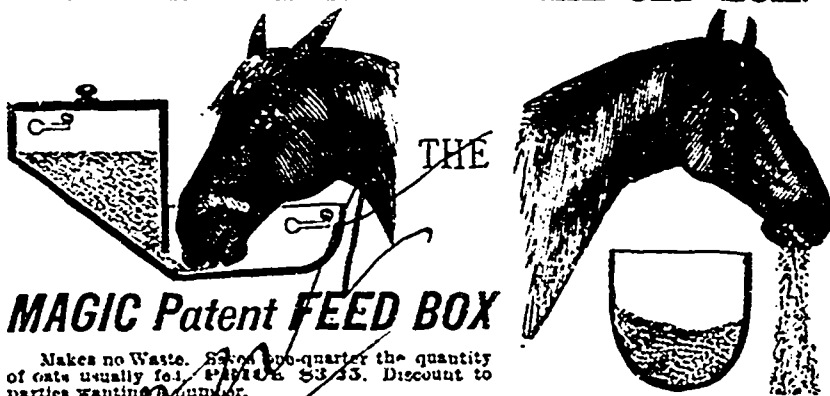
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BRANTFORD, ONTARIO.

We lead Canada in the manufacture of Iron Stable Fittings.

STANDARD Chopping Mills!

Using Best French Burr Stones.



SIZES MADE - 12 inch, 20 inch, 30 inch, 35 inch, 42 inch. All iron cases, wood frames. CAPACITY - 8 to 40 Bushels per hour requiring 2 to 20 horse power.

This cut shows 20 inch mill ready for work with

Improved Elevator Attachment.

Grain is emptied from bags into hopper on the right elevates to mill hopper ground, discharges into second elevator, elevated and bagged, bag being hung from spout.

SAVES TIME.

SAVES MANUAL LABOR.

By its use one man can readily attend to

Every Stock Raiser. Every Thresher. Every Sawmiller.

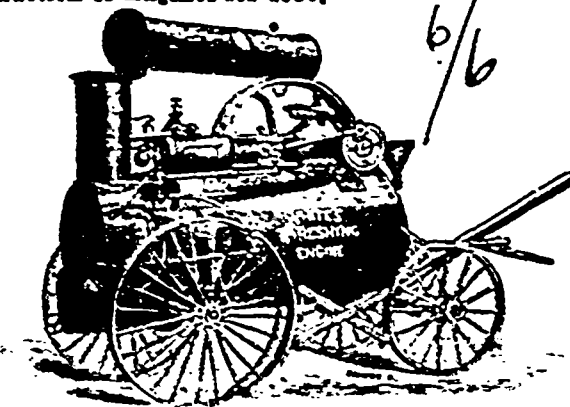
should have one. No trouble to keep in order. Stones will last a lifetime.

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124 St. James St., BRANTFORD

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In consequence of the increasing demand for my ENGINES, I have added to my shops and machinery, and shall largely increase the production of Engines for 1895.



The engines may be seen at Van Tassel's foot bridge warehouse, Belleville. As a proof of the popularity of my Threshing Engines, I may state that three or four other firms have commenced to imitate them, but sensible farmers will see that they get a genuine WHITE ENGINE.

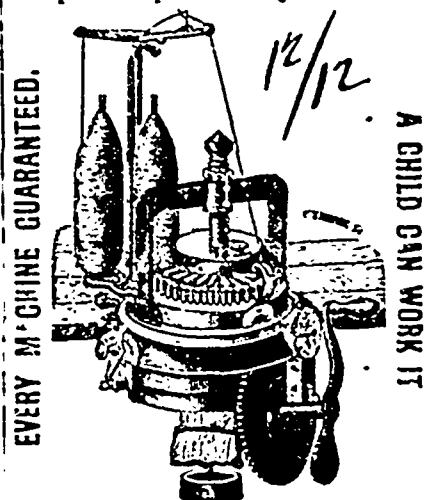
I am now making a larger number than ever before for the coming season.

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KNITTING MACHINE

Simple! Rapid! Easily Worked!



EVERY MACHINE GUARANTEED.

A CHILD CAN WORK IT

An Eclipse Knitting Machine

will pay in any family. After supplying the family requirements goods can be made for neighbours or the trade. A more profitable use of spare hours could hardly be found. A BOY OR GIRL CAN EARN \$1.00 TO \$1.50 TO \$2.00 a day on the "Eclipse." MERCHANTS can manufacture all the Hosiery, Scarfs, Mitts, Touques, etc., required in their business, during dull season, and thus keep their clerks employed. FAMILIES can manufacture their own yarn into various kinds of goods and realize 400 per cent. more on the wool they raise. The only perfect Knitting Machine is one that has a simple and reliable ribber. The ribber attachment of the "Eclipse" differs in almost every respect from others, and is pronounced perfect by competent judges. The "Eclipse" is the only Machine suitable for Family Use.

Toronto Knitting Machine Co.,
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