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THE RURAL CANADIAN.

Vol. III, No. 11.

Toronto, November, 1884.

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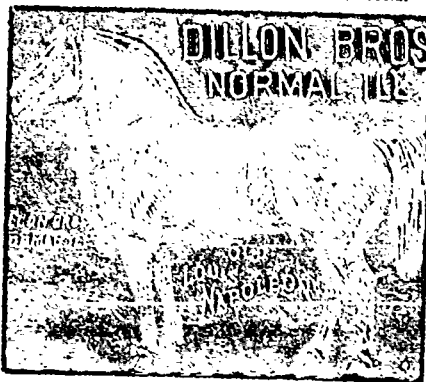


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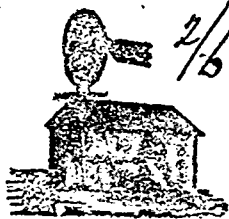
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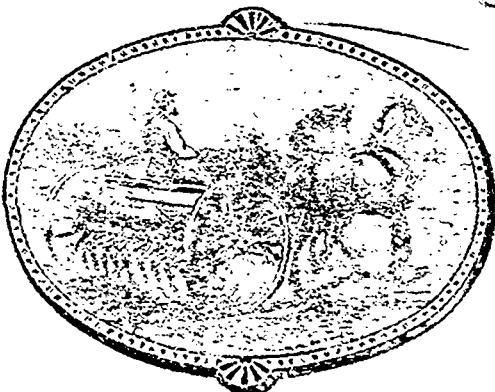
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THE RURAL CANADIAN.

Vol. III. No. 11.

Toronto, November, 1884.

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RURAL NOTES.

IN the State of Illinois, Wisconsin, Minnesota and Iowa there are 1,689 creameries. This means an immense production of butter, and as it is of first rate quality it means a large result when converted into dollars.

The fodder from a good corn crop, especially if it be cut and gathered when the stalks are in a succulent state, is worth nearly as much for cows as an average crop of hay. A mixture of both is better than either.

ALL rubbish around fruit trees should be removed and burnt before snow falls, otherwise there is danger of the trees being girdled by mice. If in addition the trees are banked with earth there need be no fear of the mice.

Timothy seed succeeds best when sown on wheat land in the fall, but in order that no harm may be done it should not be sown until a few weeks after wheat seeding. Clover is more tender, and should not be sown until spring.

The farmer who has the greatest variety of products to sell is the one best prepared for low prices, and as mixed husbandry is best for maintaining fertility it is reasonable to believe that it is the best policy for all times and places.

On the farm, and especially in the dairy, ice soon gets to be regarded as a necessity, when it has once been used. It costs but little to build a good ice house, and any farmer handy with a saw and a hammer can easily build one for himself.

Up to the middle of October 50,606 head of live cattle were shipped from Montreal to Liverpool, being 4,841 more than the corresponding period last year, and 11,696 more than in 1882. The exports of sheep to the same date were 45,596 head, which is somewhat less than last year.

The best rule for keeping apples in winter is, to keep them cool. The fruit cellar should be cool, clean, well ventilated, and have a northern exposure; and excepting on rainy days the northern windows should be kept open until there is danger of freezing. Of course apples must be well sorted to keep well.

The farmer who provides warm quarters and plenty of wholesome food for his live stock is not usually the man who seeks loans from neighbours or the banks, or who complains of hard times and low prices. Experience shows that extra care in providing choice food, pure water and warm stables in winter pays a good profit on the cost.

The labour of caring for a hundred sheep is not greater than is needed in a dairy of two cows, and in spite of the continued low price of wool the profit is not less. Sheep farming ought not to be abandoned although wool is a drug in the market. There is, as we have pointed out on previous occasions, a good opportunity in breeding sheep for the meat market, matured animals for shipment to England, and lambs and yearlings for our own and the United States markets.

In its final growth before seeding the clover plant sends its roots down into the soil deeper than at any previous stage of its growth, and for this reason land after a clover-seed crop has been taken off is richer than after almost any other crop. It is, therefore, of great importance that our farmers should continue to grow it, and in spite of the ravages of insects it may be successfully grown. All that is necessary is, to pasture the clover fields until the 10th or 15th of June, then take the cattle off and leave the crop to mature for seed.

It seems to us that the practice of feeding horses out of a nose-bag is deserving of the attention of the disciples of Bergh. It is a very unwholesome and disagreeable practice, as any teamster may learn to his thorough satisfaction by sticking his own head in a bag for the space of five minutes. Yet many a poor horse is left for the whole of his noon hour inhaling his own foul breath while munching his feed of oats—his head encased to his eyes in a close-fitting leather sack. The wonder is, not that the poor animal's usefulness is impaired by such treatment, but that he is not literally smothered. The practice is a barbarous one and ought to be suppressed.

It is only in rare instances, where soil and climate are peculiarly favourable, and with careful culture and expensive manuring, that dwarf pears are successful in a financial sense, yet on the strength of the successful rare instances nurserymen have sold millions of trees at good profits. It is a mistake to take for unqualified truth the stories of nurserymen or their itinerant agents. It is a risky thing in such matters to deal with any except well known and responsible men. To do otherwise is to run the risk of sore disappointment after the labour and waiting of years. The time will come, let us hope, when the nurserymen will find it necessary to abandon the tree pedler business, and try something less odious.

No apples sent to the English markets are in so much demand or bring such good prices as the apples grown in Ontario. A leading exporter, who has himself an extensive orchard, informs us

that the offering of a consignment of Canadian brand never fails to attract a crowd of buyers, and that the bidding is always spirited. Many American exporters understand this so well now that they make their shipments *via* Montreal and brand their apples as Canadian. But this is a matter that can be looked after, and Canadian dealers will find it their interest to attend to it. Our fruit growers have a great opportunity before them, and there is little doubt that ere long the trade will attain to large proportions. The prospect of shipments to England was never more promising than now, especially for the better and later varieties of apples.

It is noticed in the Western States that when the Indian corn crop is injured by frost, it shows at once in the weight of hogs. Thus in September of last year the hogs sold at Chicago and fed on the corn of 1882 averaged 258 pounds; while those sold in September of this year, fed on the corn of 1883, averaged only 238 pounds. This year's crop is fully ripened, of prime quality, full of saccharine matter, and the total product of the United States is estimated at from 1,800,000,000 to 1,900,000,000 bushels. It might therefore be assumed that a large increase will appear in the pork product of the country, but it must be remembered that not only was the number of hogs reduced in consequence of the failure of last year's corn, but that their condition during this year was under the average. It will therefore be some time yet before the lost balance is restored. In our own Province the conditions are much the same, and pork will be several weeks later than usual in reaching the markets.

It is stated that the farmers of Minnesota and Dakota are likely henceforth to pay more attention to the growth of flax than of wheat. The estimate of this year shows that about one-half of the entire crop of flax in the United States, or about 4,500,000 bushels, has been produced in this state and Territory, the average being eighteen bushels per acre. The wheat average is about the same, but while wheat brings only fifty to sixty cents per bushel this year flax-seed is selling at \$1.15. Indeed in many parts of Dakota the highest offer for wheat is only thirty-five cents per bushel. It is no wonder, therefore, that the farmers of this American Northwest are seriously considering a wholesale change from wheat to flax, and with a large and growing demand for the various products of flax they are sanguine that the crop will pay for many years to come. It is stated that at the present time the oilcake product of the linseed oil mill at St. Paul is disposed of entirely to the dairymen west of Chicago. Here is a hint for our own farmers.

FARM AND FIELD.

WALKS AND TALKS AMONG THE FARMERS.—NO. VI.

It is now the time of year for farm auctions, which have become established and important institutions in most parts of Canada. They serve other purposes in addition to the disposal of stock and implements. The auction sale is a sort of farmers' holiday. It is timed at a period of comparative leisure. The crops are in, with the exception of the apple and roots, the fall ploughing is well on, and the cattle are not yet tied in for winter feeding. One can have a social chat with a large number of his neighbours, without much loss of time, by attending a farm sale, and may possibly pick up a bargain or two besides. These occasions are also indications of the state of agriculture. If the price of produce is low, it affects the bidding, while, if the general agricultural market is booming, the auction will boom too. Moreover, these gatherings of farmers are opportunities for the discussion of public questions. They are informal town meetings, at which there is a free and easy expression of opinion on subjects of general interest.

In all really good farming districts, old style implements and poor stock go begging at these sales, even when offered with the inducement of twelve months' credit. So far as implements are concerned, this is often carried to an extreme. At a recent sale, a Scotch plough, rather out of style and the worse of wear, of course, sold for fifty cents. It was worth four or five times that amount for the iron that was in it. An old country two share plough, heavy enough to require three horses to pull it, but capable of doing excellent work, sold for three dollars. Its original cost was upwards of thirty, and it had been but little used. The iron stock in it was worth at least ten dollars. A sulky rake, a little out of fashion, but capable of doing good work, sold for five dollars. A grain drill in fair condition, but not of the latest style, went for ten dollars yet would do nearly if not quite as good work as a new one costing eight times that sum. Young farmers who are crippled for want of capital, might often get an implement that would serve them for two or three years, perhaps more, at a small figure, giving them time to husband their means. But they must have the best at the risk of being laden with debt. The ambition to get the best is all very well if one can afford it, but it is worth some self denial to achieve pecuniary independence. It is the bane of too many farmers that they are always encumbered with debt.

The indisposition to buy poor stock is to be commended. An implement not quite up to the work of the latest improvement, may yet be a profitable thing, but inferior animals are always unprofitable, and should be kept on the farm with the same vigilance as burglars and tramps. I called the other day on a thrifty old farmer, and found he had gone to a sale of stock not far distant. Over a hundred head of cattle, chiefly one and two year olds, were advertised, and my friend thought he might get some worth putting up for winter feeding. He returned very soon after my arrival, and said there was nothing there he cared to bid on. He saw none worth tying in the stall. There was no breeding in them. They had been picked up on speculation in—, meaning a part of the country notoriously behind in stock improvement, and he doubted if the buyer would make his own out of them. They were not fit for this locality. Undersized, unthrifty, badly-bred, there was no money in them, especially in the present state of the meat market. But, at

another recent sale of thorough-bred and high grade animals, good prices were offered for the entire lot, while individuals of special merit went high, some young bulls and heifers bringing as much as \$800 a piece. Poor stock is doomed to extinction in "this Canada of ours," and it is well that all concerned should "make a note on't," and act accordingly.

It has been too much the custom in the past to provide free drinks at farm sales, and often under their influence, there has been, in more senses than one, spirited bidding. Buyers have lost their heads under the influence of alcohol, got up senseless competitions, and paid too much for purchases. It is worthy of notice that John Barleycorn has been "hoist with his own petard" in connection with some country customs. Formerly liquor was provided at raisings and threshings, but so many accidents occurred that were directly traceable to its influence, that, as a precautionary measure, it is now generally banished on these occasions. Said an old farmer the other day, "I was at a threshing once and saw a man lose his arm through being partially intoxicated, and I vowed thenceforth, never to have strong drink at a threshing of mine, nor to let my sons attend one at which it was provided." There are still some farmers who furnish "free drinks" at sales, but they are of "the barser sort." The intelligent bone and sinew of the country feel that business done under the stimulus of alcohol, would be better left undone.

I have attended some of these farm sales during the present fall, and have been struck with the prominence of the Scott Act as a topic of discussion. It has appeared to be the question of the hour. The fact that this Act is being voted on here and there partly explains the interest taken in it, but does not fully account for the upheaval of the public mind in relation to the liquor traffic. That, as now carried on, is a national curse, is pretty generally admitted, even by those who are not ready to cry out. "O reform it altogether!" At a sale which I attended the other day, an old and well-to-do farmer whom I have repeatedly seen "slightly elevated," if not more, by alcoholic stimulants, astonished me by exclaiming. "Well I'm going to vote for the Scott Act when I get the chance. I don't exactly like it, I think it goes too far, but I like the license system far less. Why, it's a constant temptation to drink. It lures our boys into the way that leads to drunkenness. If we want the next generation to be soberer than this, we must do something, and the Scott Act is our only alternative in the meantime. Let us pass it, and then mend it, until we get it right." I think this man voiced a very prevalent state of mind among the moral population of Canada. There are many who are not prepared to adopt the principle of total abstinence, and will not convert to the theory of prohibition, and will not sign a petition for the submission of the Scott Act who will nevertheless vote for its passage, impelled by a sense of their duty to do something to check intemperance, and egged on by the fact that this is the only remedial measure to which under existing circumstances, we can have recourse. It was noticeable that at the sale in question, the present license system had scarcely a defender, although there were many present who were known to be what is called "moderate drinkers." There is no class of people who suffer more injury from the treating system than farmers. Many who are usually sober, almost invariably get more or less intoxicated when they go to market in the adjacent country town. They meet their acquaintances, are urged to take "a social glass," one and another treat, and the result is inebriety. Treating is the inseparable

concomitant of the liquor traffic as now carried on and any law that will abolish it will be an incalculable gain to the farming community. It will benefit all classes of people, and none more than the agricultural class. W. F. O.

MARKETING THE WHEAT CROP.

Growing large crops is doubtless the most important part of farming, but a good deal depends in these days in knowing how to dispose of them to the best advantage when grown. On this subject there is comparatively little in agricultural journals, and that little is mainly summed up in the advice of commercial papers to sell just as quickly as the crop is ready to market. Farmers do not follow this advice, and taking everything into consideration it is quite as well that they do not. The granaries and elevators of our large cities could not begin to hold the five hundred millions of bushels that will be threshed and stored between this and December. Europe could not take it except at such immense reductions in price as would be ruinous to the seller. Somebody must hold at least a part of it. We believe in many, and probably in most cases, the producer is better able to do this than anybody else.

Wheat is now lower in price than it has been at this season in many years. It is true a large crop is in sight, but supplies on hand all over the world are rather smaller than usual. The large crop has been pretty freely discounted by speculators already, and there is little probability of a very heavy decline from present low prices. If farmers who can do so should hold back their wheat until after the first of January, it is pretty certain that prices must harden. There are many more contingencies looking toward higher prices than there are for lower rates for this important crop.

In the first place wheat is one of the cheapest, as it is acknowledged to be the best, of the cereal foods in all parts of the world. Many more people are now using wheaten bread than ever before. It is in some parts of our country used as food for stock, and when it gets on this basis there is no limit to the amount that we can consume without relying on export for a market. Should wheat go lower still than now, farmers would at once stop selling and begin to feed to hogs in place of corn. This may be fairly called "rock bottom" in estimating values for wheat.

The corn crop is not secure and in many places there have already been frosts that will considerably shorten the yield. These are not localities where much is produced beyond the requirements of home consumption; but it will require considerable corn from other places to make good losses in this crop already incurred. It is certain that with good weather the next three weeks we shall not have such abundance of corn as to make it very cheap. If frost comes before the 20th of September we shall have a deficiency and at least fair prices. All this cannot fail to have its effect on the market for wheat and other grains.

It is more difficult to make people believe in the possibility of better prices for wheat, because with a deficient harvest a year ago we had last season a nearly constant decline through fall, winter, spring and summer. Prices were kept down by the fact that there was a large amount of old wheat left over, and by the further fact that the crop of 1883 was of poor quality as well as deficient in quantity. Neither of these causes operate now. There is little or no wheat in farmers' hands of the old crop, and what they have of now is so plump and good that it will easily grade No. 1. It is good wheat to keep, while last year's wheat was good neither to keep nor to sell. Another reason why those who conveni-

ently can should keep their wheat is because with farmers all over the country the past year has been one of unusual scarcity of money. A large majority must sell quickly, whatever the price, and it is this fact which speculators have largely discounted in making prices so low as they have. Selling wheat now, for a farmer who is not specially cramped for money, is to voluntarily assume some of the disabilities of those unfortunates who sell only because they must. It may be that under this forced selling prices will be driven lower than now, but it is safe to say that they cannot be kept through the season.

The labourer is worthy of his hire. All honest, well directed labour should give not only comfortable subsistence, but some profit besides. Present prices of wheat do this in no part of the world. Everywhere, in consequence, the production of wheat will be diminished. Should a bad season follow this year's abundance, prices will be enough higher to make up for the present depression. We are not troubled with fears that this matter will not right itself. The real difficulty lies in the tendency of all farmers to market their wheat at prices that do not pay, because they are told it is their duty to sell at whatever prices are offered.

For farmers who have debts crowding for payment, prompt marketing of their crops is not only a duty, but the best policy. Debt is an evil, and it would hardly be this if it left the debtor free, as others are, to choose his own times and ways of disposing of his property. When there are no forced sales under the hammer the debtor feels a moral compulsion sometimes in selling what he would otherwise like to keep, and a little restriction in buying what he might find it profitable to own. This is one of the misfortunes of his position, and one which should not be assumed by those to whom it does not belong. If, with regard to wheat now, those only were to sell who were obliged to, it is very certain that the entire wheat crop of the country can be marketed at considerably higher rates than will be obtained by a contrary policy. This result will have a good effect on the prosperity of the country. It is the interest of all honest business that the producer secure the best prices for his product. When grain is marketed low, and afterwards rises in the hands of speculators, a few large fortunes are made, but the general prosperity of the country is diminished rather than increased.—*American Cultivator*.

A LITTLE FARM WELL TILLED

Is regarded by those who have investigated the subject as comparatively more profitable than a large one; yet how apt farmers are to buy all the land they can get hold of, leaving themselves no cash capital for the hire of help or the purchase of stock, fertilizers and implements. A farmer in moderate circumstances, with fifty or sixty acres of land, for instance, will bring every inch of it into a high state of cultivation; the labour employed in preparing his grounds will be more than doubly compensated in his subsequent exemption from toil, while the owner of a wide-spread territory of 800 or 400 acres, which he has but sparingly supplied with nourishment, must work more sedulously upon every acre during the progress of vegetation, and, after all, reap but a meagre and inadequate harvest. As a single acre of land highly cultivated can be made to yield a crop equal to three or four scantily prepared, it must be obvious that the extra labour in dressing the former is abundantly more than saved by the diminished labour in attending it.

Farmers who, under the influence of the "land greed," grasp at the management of too spacious a territory, accumulate nothing, except now and

then an additional patch of land which serves only to increase their burdens without augmenting their income. Were they, on the contrary, to confine their exertions to smaller spots, while their crops could be rendered equally, if not more, abundant, they would themselves enjoy life better, become more independent, and, with better share of frugality, more wealthy; they would acquire time to institute experiments and to examine improvements, they would attain what they scarcely now ever possess—leisure—whereby I mean, not the privilege of being lazy, but that sort of leisure which poor Richard describes as a time of doing something useful, time for study, for reflection, for familiar converse, for looking after the education of their young, in short, for realizing the blessings after which they are constantly toiling.—*Perly Poor, in American Cultivator*.

KEEP THE BUILDINGS PAINTED.

The manufacturers of paint keep almost every description prepared ready for use, and in suitable cans to be transported, with such brushes as may be needed for domestic purposes. Some of the paints, which would answer very well for outside work, can be purchased at very moderate prices. Hence there is no reason that there should be found among farm-dwellings and out-houses so many of them going to decay for want of a little paint, which the owner or his boys could readily apply without difficulty, thus not only adding to the general appearance of the buildings, but greatly tending to their preservation. In comparison with this the cost of the paint and labour is a mere trifle and not worth counting. It is the wood-work on the outside of buildings which suffers, presenting a most unsightly appearance, and begins early to decay. A good coat of paint as often as may be needed would preserve it for at least twice the length of time that would be the case in the absence of paint. This fact is worth serious consideration, as it will be found that, instead of causing an expenditure of money that many must think is thrown away, to look at the shabby appearance of their buildings, it will prove an absolute saving.—*Germantown Telegraph*.

MANY old pastures cannot be conveniently plowed. If free from weeds, harrowing the bare places late in the fall and sowing a little timothy and June grass will insure a much larger amount of feed next season.

WHERE clover has been long grown and allowed to mature seed, many of these will fall on the ground, and remain until the favourable circumstances come for them to germinate in. With every plowing some of these will be turned to the surface, and in some cases enough to make a fair seeding. On land where such seeding can be depended on farmers need not sow as much clover seed next Spring.

THE common white flat turnip or the purple top strop leaf variety are the kinds mostly in demand by city consumers. Yet they are not so rich as the yellow varieties or even as the rutabagas. Toward mid-winter and later the early white turnips become stringy and of little value, while the yellow turnips and rutabagas are better after mid-winter than they are when first gathered.

STRAW has a considerable feeding value and this greatly depends on preserving it in good condition. The fine chaff around the corner should be distributed through the stack as much as possible, what is not should be put in the barn before rain comes, as it is impossible to stack it when wet. The centre of the stack should be kept full and be well packed, so that the straw will settle more on the sides than in the middle.

HOUSEHOLD HINTS.

A FAVOURITE way of serving beef soup at Galveston, is to pour it while at the boiling-point into a soup bowl, in the bottom of which is placed a crisp, brown slice of toast, then a fresh egg is dropped into it and it is cooked sufficiently by the time the soup is partly eaten, to be delicious.

At this season of the year, before you fill your cellars with potatoes, cabbages, apples, and other vegetables, you should look to the arrangements for thorough ventilation. Do not have such an arrangement that air from the cellar must pass up into the living rooms of your house. Such a connection between cellars and living rooms means sickness, expense, discomfort and probably death. Every heap of vegetables in a cellar will give off exhalations that are necessarily injurious to human health. Run no risks. Ventilate your cellars to the open air, not to your sitting or sleeping rooms. Admit to the rooms no air excepting that from outside, always avoiding the air that rises from the vegetable bins and heaps, the pork barrels and pickle barrels, and the usual cellar medley of things perishable.

AN "amateur housekeeper" is in trouble. Her husband is fond of pan-fish, and sometimes catches them and brings them home, where she spoils them in the cooking. They will break in pieces, and the united efforts of the husband and wife have thus far been ineffectual to prevent it. The very best way to fry pan-fish, and the way adopted by fishermen and cooks, is to first fry some thin slices of salt pork; it is of no consequence whether you like pork or not, fish must be fried in lard anyway, and the fat obtained from the salt pork is of the best quality. Take the pork out when fried crisp, leave the frying-pan over the fire to keep it hot. Then after carefully dressing the fish, roll them in Indian meal and put them into the hot fat; turn with care when one side is browned, and you will have no more trouble about their falling to pieces. This is the best way, but if you have no pork, or prefer to use lard, use it, but do not neglect to roll the fish in meal.

SEVERAL correspondents want to know how to pack eggs so that they will keep good for winter use. There is no need for any one who desires to preserve eggs, either for market or for home use, to pay one cent for any recipe. All the egg-preserving recipes that are good for anything have been published over and over again in nearly all the news, agricultural and poultry papers in the country, and if you send money to any one for a "sure method of preserving eggs so that they can not be told from fresh laid," the chances are that you will get some one of the old recipes, just as it has been published for years, or else with the addition of some useless ingredient. One man paid a dollar for a recipe that had been published by every poultry paper in the country; another two dollars for the salt method, and an Ohio woman paid five dollars for a "new and infallible method," which turned out to be the recipe for the old salt and lime way that has been in use for years. Simply packing in fine salt is the easiest and best method for housekeepers who desire to save a few dozen eggs for winter use, and for poultry-keepers who have only a small number to pack for market. Cover the bottom of a keg, cask, jar, hogshead, or whatever you choose to pack in, with a layer of fine salt two inches deep; upon this place the eggs, small end down, and far enough apart so that they will not touch each other or the sides of the receptacle; then put on another two-inch layer of salt, then another layer of eggs, and so on until the package is full. The salt can be used over and over again. Eggs packed in salt took the first prize for preserved eggs at the recent poultry show in Birmingham, England.

HORSES AND CATTLE.

FITTING STOCK FOR WINTER.

When stock has been fitted for roughing it, which, of course, means feeding up to meet cold weather, the owner is in a position to choose between carrying over to spring or longer, or sending forward to market at any time; that is, if he has fed up to such a state of fatness as will, more surely than any other, enable the animal to resist a low degree of temperature without discomfort. If a thick wall of sawdust around a body of ice preserves it from melting in hot weather longer than a thin wall, then, on the same principle, a thick wall of adipose under the hide of a farm beast protects the animal from readily suffering by exposure to cold. The sawdust in the one case is the non-conductor which prevents an interchange of temperatures between the ice within the wall and the hot air without, while, reversing the order, the layer of fat under the hide of the animal prevents the transfer of cold to the inner tissues, being a non-conductor equally efficient with the wall of sawdust in the other case. The wall of fat once placed beneath the hide is, if fair protection is given, somewhat easily held there; while it is hardly possible to put on this layer during winter's cold without extra protection from a low temperature.

Hence the wisdom of seeing to it early in the season, while flesh is easily acquired, that the gain is put on which is sure to be required when the mercury falls low down in the tube. Roughing it is nothing else than instituting a warfare between the tissues of which the animal is made up and the elements without. A moment's reflection will convince any one of the utter wastefulness of dealing out food three times a day in such free quantities as are required if food is depended on to keep up the animal warmth, reasonably comfortable shelter being denied when the weather is decidedly cold. Dr. Playfair likened the body of a beast to a furnace, in which fuel is consumed to produce heat, as the principle is quite like the feeding of farm animals, in so far as the food is given to maintain the animal heat. The continued tendency toward equalization in temperature of bodies and substances in contact acts upon live animals exposed to contact with the outer air, and hence, when the temperature goes down, there is a struggle within the body in its effort to preserve its normal temperature. This effort may be aptly likened to that made to warm a room with a heater, but little fuel being required when the outside temperature is well up, for the normal temperature of the animal body is easily maintained under like circumstances without a special provision of food for this purpose.

Fitting stock for roughing it is very unprofitable as a preliminary process, because the term implies exercise. Without the outdoor exercise in inclement, as well as in all other kinds of weather, the term "roughing it" would hardly apply. Exercise, in proportion to its extent, calls for increased action of the lungs and heart, and this lung action wastes the living tissues rapidly. It follows that quietness and seclusion are the means to be used for saving the tissues. Therefore, to feed up for exposure during winter involves a great waste during the preliminary as it does during the final experiences. But at this day we hope no one will persist in the heterodox notion that it is in any sense wise to build up during summer valuable material that is to be ruthlessly squandered during the cold months. With flesh producers, the making of edible flesh is a slow and expensive process, and flesh once put on should in no case be parted with. If domestic animals could be fattened as rapidly as

the carnivora are when they are full fed, then the task would indeed be easy. But the carnivora eat flesh and tissues having the constituents of their own bodies ready prepared, while domestic animals are built up by a slow process from material which, while made up of constituents measurably like the body, are still, in the main, quite unlike it. But it is doubtless a wise provision that the flesh counted good for use as human food is put on by a slow process, otherwise it would be flabby; would shrink in the pot, and vanish before a cold blast.—*National Live Stock Journal*.

THE NATURAL GAIT OF THE HORSE.

We are asked by several members of the Cavalier Club, says *Turf, Field and Farm*, to settle a dispute by deciding what the natural gait of a horse is. This is a question which goes to the root of breeding theories. It is admitted that the walk is natural to all, but what of the pace, the trot and the run? Stroll through the paddock with a breeder and watch closely the action of the foal. If it has been dozing in the sunshine one hundred yards from its dam it will get up with sleepy eyes, lazily stretch its legs and start off in a walk, looking back at you inquiringly. Startle it a little and you will probably see it amble or pace. Startle it more, and it will move with greater swiftness in a trot. Rush at it with shouts and the clapping of hands, and you will in some cases cause it to break into a run. The unweaned colt is still the child of nature. It has not been moulded by any school, by any training art. All the gaits struck by it, therefore, must be natural. Some horses, as they ripen, show a preference for the fast trot, others for the fast pace, and others still for the fast run. These gaits are interchangeable and the preference frequently depends as much upon foot balancing as upon conformation. Some horses fall off in speed when they change from the trot or pace into the run. Others increase their speed in making the same change. The two fastest trotting horses in the world, taking the record for our guide, are a combination of what are termed pacing, trotting and running strains. They are living evidence that great and harmonious results can be obtained by a proper blending of the three strains which are presumed to furnish us in their individuality with three natural gaits. One man breeds to intensify the trotting disposition, a second man to confirm the pacing tendency, and a third man breeds to increase the running habit. In moving to his objective point he studies form and temperament as well as other ancestral traits. And the effort to develop certain characteristics at the expense of other traits brings us face to face with the philosophy, the hotly debated theories of breeding. We shall not stir the cauldron now. We prefer to answer the question briefly. All gaits used by the foal are natural to it, but the gait at which the horse excels depends upon ancestry and the training school.

CARE OF CATTLE DURING GESTATION.

Prudent hygienic and dietetic management during the period of gestation in the cow, and especially at the time of approaching parturition is sure to more than doubly repay the owner for his trouble, and what extra expense may be incurred. For at no period of the animal's existence, is she threatened so much with danger, not so much in regard to the event which is about to happen, for labour in this animal is comparatively easy, seldom requiring any assistance from the owner. The accidents and diseases, however, which are liable to be induced during the period of gestation, and as a sequel to it are not to be trifled

with, many of them too often prove disastrous to the owner and fatal to the animal in spite of the most skilful medical treatment. The owner's attention should therefore be directed to the best means of precaution as the only salvation of protecting his cattle from the diseases incidental to cattle during pregnancy.

EXERCISE.

In calf, cows should be allowed a chance to exercise more or less daily, they should not, however, be unduly exposed during inclement weather, nor should they be allowed to be out nights in the fall, winter and spring months.

MILKING.

Milking should not be continued after the seventh month, as the encouragement of the milk supply retards the growth of the foetus in utero by diverting into mammary glands the materials which should be disposed of in the uterus.

CLEANLINESS AND VENTILATION.

The hygienic rules which should always be enforced in buildings in which animals are kept should be rigorously enforced with regard to those in which pregnant animals are kept. Cleanliness and proper ventilation is absolutely necessary.

WATERING.

The water should be pure and plentiful at all times, as then the animals will be more likely to drink often and little at a time, which is desirable.

They should not be allowed to drink very cold water, nor eat food at a low temperature. Very cold water given *ad libitum*, frozen food, such as roots, cornstalks, etc., should not be allowed to pregnant animals, as they are too liable to induce *abortion metritis* and other diseases.

FEEDING.

The food should always be of good quality, very nutritious, easy of digestion and not likely to produce constipation. The feeding of cows at the time of approaching parturition requires more special attention. A laxative, non-stimulating diet becomes necessary. Bran with a handful of ground flax-seed in each mess, properly seasoned with salt constitutes an excellent diet. It is laxative, nutritious and at the same time not too stimulating.

HOW TO BUY A HORSE.

An old horseman says: If you want to buy a horse, don't believe your own brother. Take no man's word for it. Your eye is your market. Don't buy a horse in harness. Unhitch him and take everything off but his halter, and lead him around. If he has a corn, or is stiff, or has any other failing, you can see it. Let him go by himself a way, and if he staves right into anything you know he is blind. No matter how clear and bright his eyes are, he can't see any more than a bat. Back him, too. Some horses show their weakness at tricks in that way when they don't in any other. But, be as smart as you can, you'll get caught sometimes. Even an expert gets stuck. A horse may look ever so nice and go a great pace, and yet have fits. There isn't a man could tell it till something happens. Or he may have a weak back. Give him the whip and off he goes for a mile or two, then all of a sudden he stops in the road. After a rest he starts again, but he soon stops for good, and nothing but a derrick could move him.

The weak points of a horse can be better discovered while standing than while moving.

If he is sound, he will stand firmly and squarely on his limbs without moving any of them, the feet flatly upon the ground, with legs plump and naturally poised, or if the foot is lifted from the ground and weight taken from it, disease may be

suspected, or at least tenderness, which is a precursor of disease. If the horse stands with his feet spread apart, or straddles with his hind legs, there is a weakness in the loins, and the kidneys are disordered. Heavy pulling bends the knees. Bluish, milky cast eyes in horses indicate moon blindness or something else. A bad tempered horse keeps his ears thrown back. A kicking horse is apt to have scarred legs. A stumbling horse has blemished knees. When the skin is rough and harsh, and does not move easily to the touch, the horse is a heavy eater, and digestion is bad. Never buy a horse whose breathing organs are at all impaired. Place your ear at the side of the heart, and if a wheezing sound is heard it is an indication of trouble. — *Rural Record.*

SPASMODIC COLIC.

For spasmodic colic give the horse a dose of laxative medicine, such as one ounce of powdered aloes, two drachms of powdered saltpetre, and half drachm powdered capsicum, made into a ball with sufficient soft soap. Every half hour thereafter, so long as needed, give one ounce each of aromatic spirit of ammonia and sweet spirits of nitre, in half a pint of cold water. Do not gallop the horse, but give a gentle trot between doses, leading him alongside another horse. Give also, every half hour, injections per rectum of blood-warm soapsuds. To prevent colic in idle horses, their food should be frequently changed, giving alternate moderate rations of one kind or another and of the best quality, together with good, aromatic hay, preferably wild hay, and some common salt should be constantly kept, in a separate small trough, within easy access of the horse. Thorough grooming should be attended to daily, and an hour's moderate exercise given morning and afternoon. Instead of being tied up in a stall, such a horse should at all times when indoors go loose in a box stall at least 12x16 feet, or larger. As the horse is said to be out of condition, the following powder, constituting a dose, may be mixed among his ration every evening during the week, and may be repeated after one week's interval: Take one ounce of flowers of sulphur, four drachms of black antimony, and two drachms of powdered saltpetre; mix. — *Breeders' Gazette.*

ON FEEDING COWS.

There is a great deal of good sense in the following, from one of our exchanges:

None of what we call our native stock have anything like a fair chance. If we buy a high priced improved dairy cow we think nothing too good for her. She gets the best food that the farm affords, and if that is not first-class, we buy that which is. If there is anything of merit in the animal it cannot help coming out conspicuously. But anything is good enough for the common cow. She is left to shift for herself. If she has shelter, well and good, and if she has not, it is all the same. She is expected to get along on dry fodder and litter, and it is lucky if she gets enough of them. We have seen cows kept on nothing but salt hay. We are not familiar with the composition of the hay, but it belied its looks if it contained much more nutriment than a fence rail. Cows upon such feed did not produce enough to pay for the trouble of feeding them, but, as they were "common cows," they were not expected to do much.

If feeding will go far toward creating a superior breed, feeding will improve an inferior animal. Nothing is more certain than that, as a rule. There are cows, of course, that are naturally good for nothing; and nothing can be done with them but to send them to the butcher. But

there are many valuable cows among our natives, and many indeed that are exceedingly fine cows. If such cows are well fed and well cared for, they make good breeders and are themselves eminently satisfactory for dairy purposes. Suppose the owner of a herd of common cows sees what he can do by giving his cows just as good care as the pure blooded Shorthorn and Jersey gets. He must not expect to equal them, but he will probably be surprised, if such treatment is new in his management, with the result. Suppose he provides such shelter as these breeds generally get, and which is necessary for maintaining a full flow of milk. There is nothing that will lessen the flow of milk quicker than the chilling of the cow. If she becomes chilled, as a dairyman recently expressed it to us, "you have locked the milk glands and you never can pick the lock." The cow, in other words, will give less milk at the next milking, and she will never recover until she has another calf. Once lower the flow and it is permanently lowered. But thousands of our native cattle are not guarded at all against this danger, and it is no wonder they are unsatisfactory. In the experiment which we recommended, therefore, provide good, comfortable quarters for the cow, where she will be safe from the blasts and storms of winter. Then feed her generously with good hay, oats, oil-cake, bran or middlings, and an addition of green, succulent food, such as cabbage, etc. Linseed meal in small quantities, if it is handy, will prove useful.

SHAPE OF THE HORSE'S BACK.

The *London Live Stock Journal*, in an article relating to the selection of a horse for the work he is expected to perform, after stating the results of many observations on horses, remarks that it is the arch of a bridge, which, from its structure, can bear weight placed upon it, whereas, an inverted arch would fall to pieces, or would withstand a far less pressure. It has been observed that low-backed, or rather hollow-backed horses, working in harness, kept their condition, while those with high backs lost flesh. Persons of not very inquiring or observant dispositions would probably attribute this to the fact that the former were of more hardy constitution than the latter, but this would be a false conclusion. It is owing entirely to the curvature of the back, for a horse which can draw a weight was least able to bear a weight upon its back, while the horse unable to bear the strain of draft could beat the other any day in carrying a weight. The line of the vertebrae indicates the sort of work for which the horse is fitted. If it is high the weight must be on the top to press it together; if low, the pressure must be from below for the same reason. A downward curvature is, therefore, the best form of spine for a draft horse.

BLK is not worth much in a horse unless it is put together right. A tall horse is apt to be leggy, and a leggy horse tires out sooner, than one nearer the ground. Being long in the cannon bones is objectionable. Length, however, in the arm, shoulders, thighs and haunches is desirable. These are points worth studying when selecting breeding stock of both sexes. The sire transmits the qualities of size and symmetry, mainly.

A FARMER cured a balky horse by patience and kindness—for instance, letting it stand in the woods over night at the place where it refused to draw a light load, keeping it there until it did pull, hauling a second load while hungry, and then feeding. Ever after it was a good horse—as the narrative runs—but the suspicious statement is appended that "if the horse is disposed to balk, he (the farmer) has only to start on ahead, and the horse will follow at once." The fact is, a balky horse is "a bad lot," no matter how one treats him.

CREAM.

HE wouldn't marry her, because she had false teeth. But when his wife kept him awake nights with the toothache and neuralgia, he wished he had.

A CHINAMAN thus describes a trial in our courts: One man is silent, another talks all the time, and twelve wise men condemn the man who has not said a word.

I THINK all lines of the human face have something either touching or grand unless they seem to come from low passions. How fine old men are! — *George Eliot.*

"WHAT are eggs this morning?" "Eggs, of course," says the dealer, humorously. "Well," adds the customer, "I am glad of it, for the last I bought of you were chickens."

THE diamonds worn by New York bar-tenders are said to be worth \$350,000. The carbuncles worn on the noses of the New York bar patrons probably cost about \$5,000,000.

"NINETY-five in the shade in the city," murmured the seaside landlord. "Gracious, but how I do pity those poor town people. Here, John, tell the clerk to advance the rates \$1 per day."

"SPEAKING of shad, would you say the price has gone up, or has risen?" inquired a school-boy of the fishmonger. "Well," replied the scale scraper, "speaking of shad, I should say it has roes."

NOTHING is more expensive than penuriousness; nothing is more anxious than carelessness, and every duty which is bidden to wait, returns with seven fresh duties at its back. — *Charles Kingsley.*

The plaintiff in a St. Louis suit for the recovery of money paid for a sealskin sacque avers, in her formal complaint, that the garment "hung upon her person in a most ungainly manner, destroying her piece of mind while wearing it."

"PROFESSOR," said a student in pursuit of knowledge concerning the habits of animals, "why does a cat while eating turn her head first one way and then another?" "For the reason," replied the Professor, "that she cannot turn it both ways at once."

ONE of our friends advertised for a serving man and the next day appeared a stout person of grave air, wearing enormous blue spectacles. "Have you weak eyes?" said our friend. "No, sir," said the applicant, "but I scour pots and things so thoroughly that the glitter of them hurts my sight." — *Le Figaro.*

HE is good who does good to others. If he suffers for the good he does, he is better still; and if he suffers for them to whom he did good, he has arrived to that height of goodness that nothing but an increase of his suffering can add to it; if it proves his death, his virtue is at its summit—it is heroism complete. — *Bruyere.*

To poets: In order to write poetry suitable for publication, it is necessary, first, either to understand the art of versification, or to possess a singularly correct ear; second, the poet must have something to write about, something more than a general desire to die or be a star; and third, when he feels the fit coming on, he should go and blacken a stove.

TWO little girls, one eight years old, the other six, sleep in the same chamber. In the morning the eldest one says, "Oh, I have had such a nice dream." "What was it?" "I was in a large pastry-cook shop, and I ate as many rum cakes, strawberry tarts, and bon-bons as I wanted." "Was I with you?" asked the little one. "No." And the little one began to sob.

SHEEP AND SWINE.

ENGLISH BREEDS.

THE ROMNEY MARSH.

The natural home of this breed is on land similar to that which carries the Lincoln to perfection, low, alluvial soils, extremely rich, such as Man- itoba has.

These are the marshes of Kent, where it has dwelt since a time beyond which the oldest in- habitants cannot remember to have heard. It thrives with less care than the Lincoln will, and is hardier, even to the lambs, and is not often sheltered. It has a long body, on thick, strong legs, with broad feet, a wide and thick head and neck, flat sides, wide loins and thighs, lightish forequarter; there is plenty inside fat, the wool is rather coarse, and is long, with a lock on the forehead, the fleece weighing from seven to ten pounds, glossy, staple; in demand for Mohair goods.

This breed is also indebted to the Leicesters for much of its improved character.

THE CHEVIOT

takes its name from the hills which cross the boundary line between Scotland and England, and is said to date from the Spanish Invasion, when some swam ashore from the wrecked ships of that doomed fleet.

At first it was a hardy small sheep, of light bone, but towards the close of last century it was much improved, it is thought by a Lincoln cross, until now it is a useful breed, and, upon suitable pasture, it is especially choice meat, in great demand. It is hornless, has a strong, and solid looking head which, with the legs, is white, and sometimes speckled, bright eyes, small, clean legs carrying a long body, saddle and hindquarters heavy and full, but forequarters light, (as in all breeds of mountain dwelling sheep), they are quiet, tractable, and easily restrained and fatten quickly, dressing about seventy-five to ninety pounds at three years.

The ewes are capital mothers, and the lambs very hardy, the fleece weighs about five pounds of fine wool, in large and steady demand for making the well known Cheviot cloths and Scotch tweeds.

BLACK FACED SCOTCH

is the oldest Scottish breed of sheep, and is probably the same that obeyed the call of Norval's father on the Grampian Hills, some centuries since. They are extremely hardy, strong, and quick, suitable to the most exposed situations, cold and wind swept, the body is full and solid, good saddle and quarters, large horns, muzzle thick, eyes wild, but the breed is easily managed with collie dogs.

The ewes are very kind mothers, and the lambs will bear a wonderful exposure from their birth even.

The fleece weighs about three pounds, and the carcass about seventy, the meat being of delicious flavour and in very great demand. Altogether, this breed should prove very suitable to certain districts in this country, some hilly, or with scant pasture, others exposed, or subject to storms. The only thing they cannot withstand is a heavy snow fall, the surface of which thaws, then freezes and crasts, but they have been known to be buried two and three weeks in a drift, and come out living, and will dig a light fall of snow to get at the grass below.

WELSH MOUNTAIN SHEEP.

Like many other things, though last it is not the least, in one way, for, like some other things also, the best are done up in small parcels, for from this sheep come those small legs of about four pounds weight that bring two to four times

the price of other mutton in England, and a taste of which one remembers for a long time.

From its fleece, weighing say two pounds, is made the famous Welsh flannel, which does not shrink when washed, and lasts a long time, forming the whole clothing of the Welsh farmer and his family.

These sheep are good mothers, are hardy, have long necks, high rumps, low shoulders, flat sides, and small heads; the rams having horns with faces white, or gray, or spotted.

PIGS.—BREED AND CARE.

It is a common saying that "the breed goes in at the mouth," or "lies in the trough,"—and this is partly true, for, if the highly improved races of our domestic animals of the present, do not receive that care which has been one of the means of raising them to their perfection, they will descend in the scale, so far as that affects them, and more rapidly than they rose.

A breed of animals is improved by careful selection and coupling of the breeding stock, by good care and shelter, and these whole four conditions must be observed if the best results are wished. Some think it is enough to get a pure-bred animal and, without more care or better food than they give, common stock, that the latter will improve, and when their hopes are not met they blame the breed and breeders. Others do it purposely for it is not an uncommon thing to hear a thrifty, sensible farmer say, such a cow or sow is "too fat to have young, she must have some of it taken down" and they keep the females thin, and lose many of the offspring, and the balance fail to reach perfection.

This is the class that keep a cow thin that she may milk better, forgetting that good milkers make themselves thin and enrich their milk at the body's expense, therefore, they require the best feed and care and should be kept in good condition, fat if possible. But if you select the best, largest, common sows, and put them to a refined, small boar, feed them and their young well and give good care and shelter, you will readily find that upon the same food, care and shelter, the pigs from a common boar will not grow as fat or yield as good pork, showing that the breed does not "lie in the trough" altogether.

PIG FEEDING.

It has been found by careful tests that a litter of six, taken at two weeks old, weighing twenty-five pounds, gained ninety per cent. the third week, and at the end of the next week weighed almost seventeen pounds each, and at the end of the sixth week, over thirty-one pounds each. They were fed up to eight weeks old, on new milk, and any Indian corn they would eat, and after that the milk was dropped, and cornmeal, mixed with fresh water, given instead. The first week they used twenty-three and a half pounds of milk each and gained three and a half pounds each; the third week forty-seven pounds milk and made three and three-quarter pounds, and in the fourth week fifty-two pounds of milk and made five pounds of flesh each.

This experiment, conducted by Dr. Miles of Michigan Agricultural College, gave some curious facts, and valuable and very interesting to breeders and feeders of pigs.

It was shown that a young animal eats much more in proportion to live weight, and that the younger the animal the more rapidly it gains in proportion to the food consumed, for it took sixty-five per cent. more food to make a pound of weight, the second fortnight than it did the first; and for each pound of their live weight the young pigs ate four pounds of milk the first week, and only two and a half pounds the fourth week.

During the eight weeks it required nearly twice the amount of food to give a pound of increase, than it did the fourth week.

At the end of the seventh month it was found that the pigs in one pen gained over ninety-two per cent. more, and ate sixty-one per cent. more than those in the other, (though from the same litter, fed at the same time, under the same conditions, and both lots allowed all they would eat.)

At six weeks old pig (No. 1) weighed twenty-one pounds, (No. 2) twenty-three, (No. 3) twenty-two and a half, (No. 4) twenty-three and a half, (No. 5) twenty-three, and at thirty weeks old, (No. 1) fifty-nine, (No. 2) sixty-nine, (No. 3) 133, (No. 4) 156, (and No. 5) 142 pounds.

In five months (No. 1) gained twenty-seven and a half, (No. 2) thirty-five and three quarters (No. 3) ninety-seven and a quarter pounds, (though all three were in one pen, fed with the same and at the same time,) and the latter made more flesh, in proportion to food consumed.

During the twenty-first week (No. 1) ate eleven lbs. meal, (No. 2) twelve and a half lbs., and (No. 3) twenty-five and a half pounds; and in the next month, (No. 1) ate forty-eight and a half lbs. meal, and lost one pound flesh, (No. 1) ate fifty-one and a half of meal and gained four, while (No. 3) ate 100 pounds meal, and gained nineteen and a half pounds flesh. In other words No. 1 and 2 together, ate just the same amount as No. 3 alone, but the latter gained nearly seven times the amount of flesh the former two together did, showing the value of pigs with large appetites, good digestion, and the power of placing the food where it does most good.

WINTER CARE OF SHEEP.

"The winter care of the flock," says the Pittsburg Stockman, "is where many new sheep-men make mistakes. It is no trouble to keep sheep through the summer, but often inexperienced flock-masters lose half their flock in a single winter. The reason of this is either carelessness, or ignorance of the nature and requirements of the sheep. The most successful winter care of sheep can not be undertaken without suitable stabling. This is the first great requisite. There is no use trying to keep a sheep thriving, and at the same time have its wool saturated with water, with the temperature down toward zero. Then, after seeing that you have sufficient shelter for your sheep, the next most important thing is to see that there is an abundant supply of hay or other forage. The hay and fodder must be early cut and put up in the very best condition. With these preliminary preparations a flock of sheep can be wintered safely, cheaply, and profitably. With good hay and proper shelter sheep require but little grain. These facts alone should determine every shepherd to provide proper stabling for them as an economic measure."

SHEEP TROUGH.

Provide three boards of convenient length, say twelve feet, one of which shall be twelve inches wide, and the other two five inches each; provide also two pieces twelve inches square for ends. Set one of the narrow boards on its edge and lay the wide one flat on the top of it (lengthwise of course), so that the narrow one shall stand just one side of the middle of the wide one, and so nail it fast.

Now set the other narrow board on its edge and place the wide one as before, except the other side up, and the other side of the middle, and nail as before; now nail on the ends and the work is complete. The advantage which this trough has over all others is, that the sheep do not readily upset it, and use it or neglect it as you may, it has always a dry, clean side, which all observing feeders know to be essential to the successful feeding of an animal so fastidious as a sheep.—R. M. M., in *Tribune and Farmer*.

BEES AND POULTRY.

ARTIFICIAL SWARMS.

Does this seem flying in the face of nature as it were, or as some people yet say, interfering with God's plans.

Well with these (in common with all our improved domestic animal life) artificial treatment must now be the rule, as they have been raised to their present perfect (and we may say artificial) conditions of use or beauty by artificial means.

With bee-keepers the most troublesome (especially to the beginners) and most uncertain question is that of "swarming," and anything that simplifies it or renders it possible at stated times is not only a boon to old hands, but induces a rapid extension of the gentle art.

By means of comb foundation, honey extractors, movable frames, improved smokers and hives, and daily increasing knowledge, the modern bee-keeper is enabled to perfectly control his pets.

It is hardly possible to say the exact time when such swarms may be made, as it depends upon the season and where you are, and this is a pretty large country.

Although one should always keep before them the importance of increasing the number of bees, yet it is another thing to increase the number of hives.

Good judges (Quinby and L. C. Root among them) state that it is never best to divide a colony until all the weak ones have been built up to a proper standard, by taking brood for that purpose from the stronger ones.

And if you are lucky enough to have none but strong swarms, you may add combs to them at times, so that when ready for boxing or dividing, you can spare more combs from the old stock, and it is often best to work the old hives in this way than to increase them earlier.

The safe rule for increasing or dividing your colonies is when they are strong (bees plenty) and honey abundant, and one of the best ways to do this is that pursued by L. C. Root, one of the greatest living bee-keepers.

It is supposed you have your hives ready as needed for swarms, and in each one or two combs with a queen and a small quantity of bees.

When ready take a comb having sealed brood from the old hive, (and replace with empty comb as foundation) shake the bees from it in front of the hive (letting remain on it such young bees as cling to it) and make room for it in the new hive by moving the division board more to one side.

If the weather remains good, look at the old colony two or three days after, and if the last comb added is filled with eggs and honey, you may remove another comb of brood from the old to the new hive, and always be sure the queen is not on the combs thus removed.

If there are several old stocks from which new ones are to be made, a comb may be taken from each at the same time, but if six or seven are thus taken at one time and united in one hive, where a queen and but a few bees are in waiting, cage the queen first and carry the old bees on the combs (instead of shaking them off) as more bees will be required (than the new hive contains) to cover and take care of so much brood.

A few days later another swarm may be made, in the same way, from the same old stocks.

Release the queen in the new swarm twenty-four hours after making the swarm, always using smoke freely.

The advantages of this method are, that if honey advancing ceases suddenly you will not have any partly filled hives on hand, (as you will when all but one or two combs are taken from the old hives.)

HAMBURGS.

These are usually classified as "Spangled" and "Pencilled," according to the feather marks; their general features being smallish size; bright "rose" combs, full in front, running up to a peak behind; blue legs and beautifully marked plumage.

They are non-setters and great layers of rather small eggs; small eaters though great rangers, being light they fly the highest fences easily and cannot bear close confinement (like most of the large breeds) as they love to roam.

They are rather delicate and very liable to roup when exposed to wet or cold, and therefore cannot be hatched as early as some others may.

Though the carcass is small the meat is first quality. The Spangled are hardy and lay larger eggs than the Pencilled, but the latter lay a larger number.

The Black Hamburg lays the largest eggs and the greatest number of them of any of this breed, and it is said to be the most prolific egg-producer of all fowls.

SILVER-PENCILLED HAMBURGS.

The shape and carriage of these, as of the others, are graceful and sprightly, the tail carried high and arched, ear lobes white; head, hackle, saddle, breast, back and thighs of cock pure white; tail black; sickle and side feathers edged with white; wings mostly white with black edging.

In the hen the hackle is pure white, and the rest of the body pencilled with black bars, (clear).

GOLDEN-PENCILLED

In these the main colour is rich golden, reddish brown, with black markings much like the preceding variety, the cock's colour being always much darker than the hen's.

GOLDEN-SPANGLED.

These differ from the former (which have the bars or "pencils" across the feathers) in having the one black mark or "spangle" at the end of each feather.

Although there is only one recognized marking (in the show ring) of this variety, (that with round spangles or moon shaped,) yet there is another with crescent shaped spangles, a distinct breed, known as "pheasant fowls."

The Golden-spangled main colour is golden red, with deep black (green reflection) markings, as above; hackle streaked with black in middle and edged with gold; tail all black.

SILVER-SPANGLED.

The ground colour of these is silvery white, with black spangles; but in the hen the outside tail feathers are white, with tips black only.

Silver-spangled Hamburgs are much better layers than Golden-spangled, but the breeding necessary to secure perfect, or even excellent marking is so complicated that the ordinary poultry fancier has neither time nor patience for it, and the best results are only attained by long practice and full knowledge.

Black Hamburgs are, doubtless, the result of a Spanish cross, (the size, legs, large eggs and face showing it,) but it is now a distinct variety, and breeds true. The comb and wattles are larger, however, than in the others, and the legs short, the body square and heavy, (the cock often running to seven pounds,) and the colour black, with green reflections.

FRENCH BREEDS.

We have some splendid varieties of fowls from France,—heavy, with little offal, all non-setters, and great layers, and more or less head crested, the variety best known here, being

THE HOUDAN.

This is thought to have sprung from a cross of

Dorking and white Poland, as they have the form, size, deep, solid body, short legs, and *with toe* of the Dorking, but their bones and offal are smaller. Their colour is commonly white, with large black spangles, giving them a fantastic look, increased by the black and white crest, and the peculiar comb, like two leaves spread open, and a long strawberry in the centre, (as one writer has described it.)

They stand confinement fairly well, are very great layers of good sized eggs, nearly always fertile; they mature early, the chicks feather rapidly and are extremely hardy, and they are a good fowl, (perhaps one of the best) for the farm or large "run," but they will not "get," though this is not a draw back, now that incubators are becoming so well understood.

PROFIT IN POULTRY.

Says James Rankin in *The Homestead*. I have sixteen cows in my barn, my neighbours call them good ones. The milk is sold in a neighbouring village at remunerative prices. It requires the labour of two men and one team to milk, care for these cows and deliver the milk. I have 350 pullets in my yards; with but a tithe of the labour and capital employed, these pullets last winter made me more than double the clear money that my cows did.

I am well acquainted with two young men who are running a poultry and a dairy farm conjointly. The one is an invalid, keeps 1,000 hens, the care of which occupies about one-half of his time. The other keeps thirty cows, from which he makes butter of so good a quality that it really commands eight to ten cents above standard price. This man raises the usual farm crops, reads the papers carefully, knows something of labour and its application, and runs his gang of four or five men with an eye to business. Yet the invalid brother, with less than one-tenth of the labour and capital employed, clears double the money from his 1,000 hens that his brother does from the whole farm.

One instance more. E. Damon, of South Hanson, Mass., told me not long since that he had 750 pullets in his yards, 600 of which had been confined in one building all winter without stepping out of doors. The building is 60x40 feet, divided into four compartments, each 15x40 feet, 100 fowls being confined in each. These fowls had furnished him with thirty-five dozen eggs per day during the winter. These eggs were taken at the door at forty-two cents per dozen. This gave him \$11 clear profit per day, with only a few hours' care.

GET RID OF THE OLD HENS.

As a rule, too many old hens are kept—not too many hens, but too many that have passed the age of greatest usefulness and production, and that scarcely earn the food they consume by the eggs they produce. The most profitable egg-producers are early hatched spring chickens, which will begin to lay in the fall, and if furnished with warm quarters and proper food, will produce eggs quite freely through the entire winter. But it is not wise to reduce the flock in the fall wholly to spring pullets, since hens a year or two old make more reliable setters and mothers, and a sufficient number should be kept for this purpose. Outside of the number required for such service, every hen over two years old had better go to the pot or to market. This is one of the cases in which we can't afford to keep them for the good they have done, as we do the old family horse or house dog, between whom and ourselves there has grown up relations of personal friendship. Every poultry-keeper should, in the next few weeks, rid his flocks of all past age fowls, and go into winter quarters with young, strong, vigorous birds.

THE DAIRY.

DAIRY INTERESTS IN BRITAIN.

In a paper upon this question, Lady Vernon states that "the depreciation in the capital value of their land is due in a great measure to the small margin of profit to the manufacturer, who consequently has no spare capital to invest in it, but more to the fact that the arable farmer during the abnormally prosperous seasons between 1871 and 1877 contracted extravagant habits which he has been unable since to curtail."

We had a higher opinion of the English farmer than this, of their shrewdness and look-ahead nature, certainly the class we are getting, cannot be accused of lacking the strength of character to deny themselves anything that may be dangerous to their welfare. We think the Honourable Lady will need to look farther afield than the "extravagant habits of farmers" for the cause of the drop in land, and other values in England in the past six years. There is a lot of nonsense talked about farmers, by those who know little and care less of farms, farmers and farming, that they "buy too many machines," "do not read enough," "stay too much at home," "keep too many fast horses," "work too much land," etc., etc.

In the name of good sense and taste why cannot the business or profession, and the habits of the worker or employer of the soil, be allowed to regulate themselves and pursue their own best advantage, the same as the merchant, the artizan or any of the professions?

Some time ago, in England, a writer seriously stated that farmers "should not buy pianos, carriages, or nice clothing for their families," and though this sounds laughable to us in America, where the farmer moves, acts, lives and has his being like any other sane man, yet it must have sounded strangely in the ears of English farmers, who, of necessity, must possess large private capital to enable them to pay the heavy expenses of cultivating land there.

Further on, Lady Vernon makes this striking statement, "the arable farmer made his harvest in the last decade, and did not invest his undue profits, and spending the average profits of a short term of years, he lived extravagantly, never looking after his business, and the result has been ruin (the italics are ours.) According to this the farmer who invested his "undue profits" in improvements on his farm, stock, implements, etc., would be in the same position now as the one who invested in household furniture and gave his family the advantages of refined modern society, and the only safe man would be he who invested in undoubted security at good interest, outside the farm. We will not further note this letter except to ask the author, or any English farmer in England or in this country, to give us their opinion of the present low value of land in England, and while about it, please explain the meaning of "undue profits," and "extravagant living," as relating to the farm and farmer, and if it is the case that the average English farmer "never looks after his business." If so, how is it he beats the world in his yearly wheat average per acre, that he continues to supply us with the best breeding stock of cattle, horses, pigs and sheep, and that we are proud and glad to get as many of them as possible in Manitoba and the North-West (where we find they look very carefully to their business.) The article winds up by saying that "it depends upon the railway companies whether farming is to continue a prosperous industry. By their conveying maize and cotton cake, to feed animals at a reasonable rate, stock will soon double, farmers make more profit, extend their purchases and trade will revive." (This seems a little inconsistent, to us with the former extracts.)

WINTER DAIRYING.

We hear of progressive dairy farmers who have provided themselves with modern improvements and appliances for making "gilt-edge" butter right through the winter season, and of some who make a specialty of winter dairying, and prefer to have most of their milk in winter. But there are still living many old-fashioned farmers who continue to make June butter in that month and fall butter in September, and dry off their cows as cold weather comes on. It is for the benefit of this class of very estimable farmers that I propose to give some account of my experience with winter dairying.

I began with a herd of common cows, kept in a large open yard all winter, with no protection from cold, and only partial protection from winter storms. I foddered them morning and night with straw and cornstalks. The strongest cows appropriated the most sheltered corners of the yard and the best of the fodder, while the weaker ones had to rough it as they might. I stripped the cows morning and night. Few cows in the herd gave milk enough to amount to more than a stripping, and the process was not altogether pleasant for the cows or their owner, especially in stormy weather, when the cows were sometimes half buried in snow, and at other times standing in slush and mud, with their long shaggy coats saturated and dripping with chilly rain. The milk was set in shallow pans in a small, well-built milk-house, but with no provision for regulating the temperature. The milk and cream would freeze more or less, according to the varying temperature of the atmosphere; and the work of skimming the milk was often a little more vexatious than that of stripping the cows. The time consumed in churning varied from ten minutes to as many hours. But the most disheartening feature of the whole business was not appreciated until I attempted to market the dubious product of my winter's labour.

I determined to try again, and began early in summer to provide a few simple improvements in the way of better accommodations for the cows and their milk. Along one side of my barn floor was a bay used as a hay mow. This was converted into a row of cow stalls, with mangers adjoining the barn floor, a slightly raised floor just wide enough for standing room for the cows, a gutter to receive the manure, and a passage-way behind them. These fittings were simple, and their cost was trifling. In November the cows were put into these stalls. A quantity of forest leaves was collected and used for bedding. The ration was improved by the addition of two quarts of a mixture of ground oats and corn and cotton-seed meal, fed twice a day at milking time, and a little clover hay given at noon. As soon as the cows became accustomed to their new quarters they gave unmistakable evidence of appreciation. The work of foddering and milking was all done under cover, so that many annoyances of the previous winter were avoided. Before spring the cows had grown plump and sleek in appearance, and a manure pile had accumulated in the yard such as was never seen there before.

A cooler creamer was procured and placed in the well house at the barn, where it served the double purpose of warming slightly the drinking water for the cows, and cooling the milk. Thus ended all the troubles and most of the labour of caring for the milk. A dairy thermometer was obtained and proved very useful by facilitating the production of a uniform quality of butter. We soon had such a demand for our butter that it was taken right from the churn at one-third above the current market price. The yield of butter from the same old cows averaged nearly one pound a day for each cow all winter. The

skimmed milk, as drawn from the creamer, was fresh and sweet, and very acceptable for table use, and several neighbours were glad to be supplied with it at four cents a quart. Look on this picture, then on that—neither is overdrawn!—*B. F. H., in Practical Farmer.*

SELECTING A MILCH COW.

The best sign for richness of milk is deep orange colour inside the ears. Such is said to be infallible, but there are accompanying points that assist the expert in making this selection from a number. After examining the ears, feel the skin on the rump and observe that it should be soft, velvety, and fall again to its position when the hand is removed. The hair should be fine and silky, with a yellowish cast underneath. The milk veins should be very prominent, large and uniform in size, knotted or waved, and the udder well balanced, extending full to the rear, and well forward in front. The bones should be fine, the eye mild and expressive, the body showing a tendency to avoid accumulating fat, the teats even and at regular intervals, with the es-cutcheon well defined, dandruff being easily rubbed therefrom, and the cow should be not only a good feeder but a good drinker also.

HOW BAD BUTTER IS MADE.

Cream from unsound milk, cream that has been long in rising, cream that has been kept too long after skimming—none of these can be made into first rate butter by any skill in churning or after-treatment. Good cream will give pale and spongy butter if churned at too high a temperature. Butter will come all the way up to seventy degrees, and even a little higher in winter, but it will be poor; and, further than this, if cream is churning six or eight hours and the butter has not come because the cream is imperfect or the temperature is wrong, though the temperature may then be rectified and the butter brought, the product will be inferior in colour, texture or flavour, and generally in all three. It has been so hurt by over churning that it can never be restored to anything like excellence.—*Mirror and Farmer.*

When butter is kept in tubs or earthen vessels, it must be packed as close as possible, and no interstices or vacant spaces left, for the butter quickly spoils around these interstices, and the evil spreads through the whole tub. In large establishments, it is considered essential that a tub be filled with butter made all in one day.

It is a good sign, says the *V. S. Dairyman*, to see so much interest taken by the managers of butter and cheese factories in the use of whey as a calf food. No doubt the dairy herds of the country would be greatly improved if more calves were raised on the dairy farms; and as this is a mere question of economy of food, any method that would reduce the cost of raising the calves would greatly benefit the dairies of the country. The great trouble now about feeding whey to calves is in getting it to them in a fresh and sweet condition, for it must be sweet in order to get the most benefit out of it for the calf. To be sure, partially soured whey, when mixed with certain ground feeds and freshly cooked, is acceptable and nourishing to the calf; but in that instance the cost of the ingredients tells strongly against the economy of the feed. Now, however, that the question is up for discussion, some one may hit upon a plan by which the whey from the factories may be fully utilized in this useful manner. Let those who think about it tell others what their plans would be for using the whey.

GARDEN AND ORCHARD.**WALKS IN THE GARDEN.—No. 1.**

What to do with a stiff, heavy clay soil has no doubt puzzled many an amateur gardener. A leaf from my note book may help some one to solve the difficulty. In the spring of 1881, I bought the place on which I now live, and commenced to form the surrounding ground into a garden. The soil was a heavy red clay, and potatoes had been grown on it without manure till all the goodness seemed to have been taken out of it. I contented myself with keeping the weeds down and growing a few odd things that summer, and in the fall had it thoroughly under-drained. I drew on leached ashes at the rate of twenty loads to the acre and long manure in about the same proportion, digging the manure in as the soil was ridged up and scattering the ashes on afterwards. Next season I was enabled to raise a fair crop of vegetables, and in the fall repeated the same treatment. Last fall I substituted coarse builder's sand for ashes, with so good result that I intend to repeat it this year, when I am satisfied no more mechanical manures will be needed. The ridging allows the frost to get into the soil, and in the spring it is as mellow as an ash-heap, requiring no digging but simply levelling with a rake, when it is ready for the seed. It is generally easier to hire help for digging in the fall than in the spring, and the wise gardener will always do his digging then. Not the least advantage is that the soil can be worked two or two weeks earlier than when it is left in the fall just as the crop came off it. I do not know that it is necessary or advisable in sandy land, but it is indispensable in clay.

No gardener, no matter how small his holding may be, can afford to do without labour-saving implements—not only because they save labour; but because they enable one to do for himself with ease what he will always find it very difficult to get help to accomplish. Who has not bemoaned valuable plants cut down by a man-of-all-work hired to do a day's weeding? The most genuine labour-saver I know of is the wheel-hoe. There are various makes, but to my mind none so good as the Planet, jr., double wheel. Besides the hoes, which are reversible, cutting to within half an inch of each side of a row, and throwing the soil to or from the plants, it has four cultivator teeth and two plows, with which the furrows can be made deep enough for planting potatoes, without undue expenditure of muscle. The hoes cut six inches, and with them weeds can be exterminated as fast as a man can walk. The cultivators are very handy too and save a deal of back-breaking labour with hand tools.

The weight of opinion now-a-days seems to be in favour of flat culture for potatoes, instead of hilling. I have practiced the former for some years, and would be perfectly satisfied with it were it not that some of the tubers will get their heads out of the ground and become green, otherwise it is far preferable, saving hand labour, as all the cultivation can be done with a machine.

TALKING of potatoes, I have found none that pleases me nearly so well as the Ontario, sent out by the Fruit Growers' Association a few years ago, and the best of many good things it has distributed to its members. The tubers are nearly oval in shape, pink in colour, the skin slightly rough and the eyes on or above the surface. The size and shape are exceedingly uniform, and its appearance alone would sell it. The quality is excellent, and it is equally good in September as in the following June. In seasons when the rot

has destroyed all other kinds, Ontario has come through sound as a dollar, sometimes under very disadvantageous conditions. It is a late potato. Chicago market would be my choice for early. It is the most prolific I have found in fifty or more varieties during several years past, yielding at the rate of 100 bushels per acre more than any other. It too, is of good quality, and nice appearance. White Star is valuable for use in summer before the new crop comes in, but is not in perfection till some months out of the ground.

HAVE you tried Henderson's new White Plume celery. If not, make a note to get the seed next year. The foliage is almost white, and after being once handled, it blanches without any further trouble. The blanching of celery is always a bugbear, but here is a variety that does the job for itself. There is no excuse for not having celery now, since White Plume has been introduced. The quality is as good as Saudringham, which is all that need be said.

If your cellar is not equal to keeping celery through the winter, try flax sheaves, if you live near a flax mill. Before the killing frosts come, cover over the plants with three or four inches of sheaves, and place boards about six feet long, thus A, to shed the rain. When you want celery in the winter, take off the short boards, shovel away the sheaves, and you will find the celery white and crisp below. Four inches of sheaves will keep out the severest frost we ever have in Canada. Y.

THE MOVEMENT OF SAP IN TREES.

How sap moves in trees is a question to which botanists have given a great amount of thought and experiment. Mr. A. S. Fuller, in his new work on "Practical Forestry," gives his readers a chapter on the subject from which we make the following extracts:

"All plants obtain their nourishment in a liquid or gaseous form, by imbibition through the cells of the younger roots or their fibrils. The fluids and gases thus absorbed, probably mingling with other previously assimilated matter, are carried upward from cell to cell through the alburnum or sap-wood until it reaches the buds, leaves and smaller twigs, where it is exposed to the air and light, and converted into organizable matter. In this condition a part goes to aid in the prolongation of the branches, enlargement of the leaves, and formation of the buds, flowers, and fruit, and other portions are gradually spread over the entire surface of the wood, extending downwards to the extremities of the roots. We often speak of the downward flow of sap, and even of its circulation, but its movement in trees in no way corresponds with the circulation of blood in animals, neither does it follow any well-defined channels, for it will, when obstructed, move laterally as well as lengthwise, or with the grain of the wood.

"The old idea that the sap of trees descended into the roots in fall, remaining there through the winter, is an error with no foundation whatever. As the wood and leaves ripen in the autumn, the roots almost cease to imbibe crude sap, and for awhile the entire structure appears to part with moisture, and doubtless does so through the exhalations from the ripening leaves, buds, and smaller twigs, but as warm weather again approaches, and the temperature of the soil increases, the roots again commence to absorb crude sap, and force it upward, where it meets soluble organized matter changing its colour, taste and chemical properties. If this was not the case, we could not account for the saccharine properties of the sap of the maple, or for the

presence of various mucilaginous and resinous constituents of the sap of trees in early spring, because we find no trace of such substance in the liquids or crude sap as absorbed by them from the soil."

The life of the tree, Mr. Fuller teaches, is all in the bark and sap-wood the heart being dead, and serving the tree only to strengthen it mechanically, as shown in the fact that it may be removed entirely by decay, and still the tree grows on vigorously for centuries.

MANURE AND THE ORCHARDS.

A correspondent of one of our contemporaries writes: "Unless we take to drawing more-manure on our orchards, the trees should be much further apart than they are. Two rods each way is not enough. Forty feet is better and forty-five better still. But with these wide distances the trees should be sheltered from heavy winds or the fruit will be blown off before it can be gathered. On the other hand too close setting of trees may be remedied in part by heavy manuring. I have in mind an old farmer whose apple-trees, set altogether too closely, occupied a half acre, in which his hogs rooted and lay through summer. The hogs were well fed, but they rooted the ground so that not a spear of anything could grow. The farmer never failed to have excellent crops of fine apples, which paid him better than any other area of five times its size on the farm. This farm has been under other management the last seven years, and is less productive than formerly. Yet I firmly believe that with pigs and manure good crops of apples may be grown every year."

MAKING APPLE TREES BEAR EVERY YEAR.

In many parts of the country apple trees yield a crop of fruit only every alternate year, the year represented by an odd number (1869) being barren, while that represented by an even number (1880) will be fruitful. In other places orchards bear every year. Some trees will yield fruit only every other year, while others near them on every side will produce a bountiful crop.

Two seasons are required to produce a crop of apples, that is, during one season the fruit-buds are developed, and during the next the fruit. All the vital energies of some trees are employed during one season to develop the fruit buds; then the year following their entire vitality seems to be spent in developing the fruit, without sufficient force being left to form fruit-buds for the crop of the next season.

Now, in order to induce an apple tree to bear every season, climb into the top, or go up on ladders, just as one does when plucking the ripe fruit, and with a pair of sharp shears clip off all the young fruit from about half the tree. Then fruit-buds will form on that side of the tree from which the young apples were cut off. One-half the top, then, will bear fruit one year, while the other half will yield fruit the next season.

THE roots of any tree are important; never buy a tree with poor roots because it has a good top, better buy a tree with good roots and poor top, than one with the most beautiful top, with poor roots; for with good roots there is a chance to make a good top, but without roots the best top must die.

CUTTINGS of currants and gooseberries can now be made. Take this year's wood, cut in pieces six or eight inches long, and plant in nursery rows, a few inches apart, with all but one eye each above ground. Pack the soil tight around the cuttings and mulch, or tie them in bundles and bury them in sand in your cellar until spring.

GOOD PAY TO AGENTS.

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

C. BLACKETT ROBINSON,
5 Jordan Street, Toronto. Publisher.

The Rural Canadian.
TORONTO, NOVEMBER, 1884.

STORE CATTLE FOR ENGLAND.

Prof. Brown, of the Agricultural College, has written a letter on the subject of shipping store cattle to England, there to be finished by English feeders for their own market. What is to be said for and against the project is somewhat carefully discussed by Prof. Brown, but we do not think that he sustains by fact or argument the conclusion which he appears to have reached, viz.: that the shipment of stores to England can be undertaken with profit to the Canadian farmer. At the best, according to his figures, the profits are about the same whether the farmer sells a store or a finished animal; but no account appears to be taken of the manure product of the animal fed on the farm, or of the cost of ocean freight. If we are to retain the fertility of the soil we must feed it; we must restore an equivalent for what is taken from it. But this cannot be done if we sell off both grain and cattle in the raw state. What is required is to sell only the finished article in its most compact form, and to keep as much nutriment as possible to maintain and improve the fertility of the land. It is unreasonable to suppose that cattle can be fattened as economically in England as in Canada, since with us all the raw material is cheaper. Besides, it must be remembered that ocean freight on live stock is charged by the space, and that the cost of shipping to England as tocker of 1,200 lbs. is as great as the cost of a finished beast of 2000 lbs. On the whole we do not agree with Prof. Brown.

THE WHEAT MARKET.

Wheat is moving very slowly, owing no doubt to the lowness of the price. In England it has touched a lower point this year than any time for the last hundred years, and there is nothing to indicate that an upward tendency may be looked for in the immediate future. The fact is that the wheat product of the world has been enormously increased during the last ten years. Railways have been extending in every country fitted by soil and climate for the growth of wheat—not merely in America, but in Eastern Europe, in Southern Asia and in Australia. Ocean navigation also has been keeping pace with the demands of trade, and wherever railway and shipping services have been supplied tillage of the soil has received more and more attention. A few years ago it would not pay to grow a bushel of wheat beyond the requirements of home consumption in the great region west of the Mississippi and the Red Rivers, or in the central Provinces of India; for with no better or cheaper means of transportation than the bull-dock-cart the cost of moving wheat a few miles is equal to its price in the market. But the situation is rapidly changing, and henceforth over production of wheat will be no more a surprise to the world than the over-production of cottons or sugars. For this reason we think that farmers will look in vain for any marked rise in the price of wheat during the present harvest year, and in their own interest as well as in the interest of trade generally we think there is much to be gained by the early sale of surplus stocks.

INSECT PESTS.

At the annual meeting of the Canadian Entomological Society, which was held two weeks ago in the city of London, President Saunders gave an interesting address on the subject of insect pests, dealing largely with such insects as appeared to be most destructive to crops during the year. One of these was a caterpillar which infested clover fields in the Ottawa district, and which rapidly devoured the foliage of the plant. It is described as a species of cut-worm, measuring one and a quarter to one and a half inches in length, with dark yellowish brown head, and a black body with two yellowish stripes on each side. Much of the clover in the district was seriously attacked by these worms, but being affected with some kind of disease they were soon destroyed in great numbers, of fifty or sixty specimens collected by Mr. Saunders for rearing, all died—only one surviving the chrysalis state, and this did not mature a perfect insect.

Another variety of cut-worm, which feeds on the young and succulent corn plant, was also found to be very plentiful last spring and did a great deal of damage. The eggs are laid by the parent moth in the latter part of the summer, are hatched out in two or three weeks, and the partially grown larvæ burrow into the ground in the fall, where they remain in a torpid state until the warmth of spring awakens them to new life. Emerging from the ground they feed upon every green thing, and when full grown they again burrow in the earth, change to chrysalides, and in two or three weeks escape as mature insects. As means of checking the ravages of this pest, Mr. Saunderson recommends showering the plants with Paris green and water, sprinkling them with air-slaked lime or hellebore, or strewing the surface of the ground around the plants with lime or soot, or mixtures of these substances. Another treatment he recommends is to mix a teaspoonful of coal oil with a pailful of sand and straw a little of it about the plants. This method is rapidly growing in favour, as besides being very effectual the cost of the application is trifling. Still it is hardly feasible to undertake the protection of field crops in this way, and owing to the large number of parasitic enemies of the cutworm it is hardly necessary.

Another destructive pest of this year is the wheat midge, which prevailed to a considerable extent in the western part of the Province. Some varieties of wheat were found to be much more injured than others, notably the Egyptian and the Michigan Amber; the Democrat was almost free from it. Mr. Saunders recommends, as the most practicable method of lessening the depredations of this troublesome insect, the selection of some of the best of the so-called midge-proof varieties for seed, the kernels of which harden so early in the season that the larvæ are unable to feed on them.

A fourth variety of which some account was given is the grape-vine flea-beetle. It is about three-twentieths of an inch long, varies in colour from steel blue to green, hibernates in the perfect state, and awakening in early spring proceeds to feed on the tender buds of the grape-vine. These insects were so plentiful in some vineyards as to wholly destroy the crop. It is recommended that they be collected by spreading sheets under the vines and jarring the canes early in the morning, when the beetles are in a torpid state, or that they be poisoned by syringing the buds with Paris-green and water.

Reference was also made by Mr. Saunders to the plum curculio, which continues its work in most parts of the Province where plums are

grown. He advises the adoption of a remedy suggested some time ago by Alex. McD. Allan, of Goderich, namely: Paris green and water in the proportion of a teaspoonful to a pailful. This remedy should be extensively tried by thoroughly syringing the trees with it as soon as the fruit has set, and repeating the application in a few days should rain occur to wash it off.

A sixth insect referred to is the raspberry saw-fly, which is reported to have done considerable damage in the neighbourhood of Drummondville, or Niagara Falls South, as the village is now called. It is a green worm much resembling the currant worm but differing from it in having no black dots. It feeds voraciously on the leaves, and if allowed to pursue its way it speedily disposes of everything except a net-work of the coarser veins. An application of hellebore and water, in the proportion of an ounce to a pailful, very soon destroys this pest.

The seventh and perhaps most to be feared of insect pests, alluded to by Mr. Saunders, is the punctured clover-leaf weevil. The beetle is about two-fifths of an inch long, of a dark brown colour marked with yellow, and has its wing cases thickly punctured. Each female is said to deposit 200 or 300 eggs, sometimes on the surface of the clover leaf but more frequently thrust into the interior of the older stems. The young larvæ are to be found early in May, and at first feed among the folded young leaves or attached to their under side. They feed chiefly in the night and hide in the day time among the roots and stalks of the plants. Prof. Riley, of the United States Department of Agriculture, gave an account of them as long ago as 1881, but they do not seem to have crossed into our Province until this fall. Mr. A. H. Kilman, of Ridgeway, found them in large numbers in his locality about the 10th of August, when they were wafted across the river from New York State by prevailing east winds, and he is of opinion that they will open up a lively campaign in the spring. As the larvæ will be found most numerous in the latter part of May or early in June, Mr. Saunders recommends that the clover be heavily rolled at that time for the purpose of destroying them; or, if the fields should be badly infested, a still better remedy is to plow the clover crop under.

An insect of the bark louse species was found to be very injurious to maple shade trees last spring, the eggs of which are hatched from a cotton-like tuft attached to the smaller branches. It is recommended that the branches be well rubbed with a stiff brush or broom, and then washed with a solution of washing soda, or coal oil and milk diluted with about ten-times its bulk of water.

Mr. Saunders has done valuable work, both as an entomologist and as a horticulturist, and as president of the two provincial societies of Entomology and Horticulture he has collected and published a great deal of useful and practical information for the benefit of our farmers, fruit growers and gardeners. His recent address shows that he is still as earnest as ever in the pursuit of his special subjects.

The appointment of Mr. A. Blue, as Deputy-Minister of Agriculture, is one that will commend itself as eminently suitable in every respect. The Government could not have made a happier or more popular selection. Mr. Blue will discharge the duties of the position in such a manner as will reflect credit on himself, and to the manifest advantage of the great interests in his charge. He will, we understand, continue to be Chief of the recently-organized Bureau of Industries, which he has by unceasing and intelligent work made so useful to the Province.

CANADA SHORTHORN HERD-BOOK.

Below we give a list of transfers of thorough breeds reported up to October 20, 1884. In the following list the person first named is the seller and the second the buyer.

H. Duchess of Kent (vol. 9), by Duke of Wellington [7001]—Wm. Dawson, Vittoria; Wm. Sheppard, Cattour.

B. Robin Hood [12225], by British Statesman [8175]—James Russell, Richmond Hill; John L. Pearce, Wallacetown.

C. Queen of Scotts 4th (vol. 9), by British Statesman [8175]—James Russell, Richmond Hill; John L. Pearce.

C. Fair Queen, 4th (vol. 9), by British Statesmen [8165]—James Russell, Richmond Hill; John L. Pearce, Wallacetown.

B. Springbrook Lad [12226], by Robin Hood [12225]—John L. Pearce, Wallacetown; James Ross, Iona.

C. Lergie Rose (Vol. 9), by Robin Hood [12225]—John L. Pearce, Wallacetown; Donald McMillan, Lergie.

H. Oxford Pride (vol. 9), by Robin Hood [12225]—John L. Pearce, Wallacetown; Augustus Gosnell, Highbate.

B. Westmoreland Lad [12230], by Robin Hood [12225]—John L. Pearce, Wallacetown; Wm. Simpson, Strathburn.

B. Plough Boy [12231], by 6th Duke of Kent [11643]—Michael Fischer, Mosborough; A. Vance, Mosborough.

B. Ben Davis [12233], by Blooming Mayflower [8153]—John Miller, Brougham; Wm. Rutherford, South Monaghan.

B. Roan Prince [12234], by Ben Davis [12233]—Wm. Rutherford, South Monaghan; G. A. Elliott, Peterboro'

B. Lafayette [12235], by Roan Prince [12234]—G. A. Elliott, Peterboro'; James Baptie, Peterboro.

B. Honest Tom [1236], by Baron Gano 2nd [4578]—Ed. D. Morton, Barrie; Robert Wilkinson, Painswick.

B. Jumbo [12240], by Comet [8254]—John Webber, Strathallan; Isaac Webber, Strath-Allan.

B. Hector [12244], by Lawrence [8798]—John Hamilton, Grand Frenerre, Quebec; James Hamilton, Belle Riviere.

H. Rose of Clifton (vol. 9), by Baron Surnise [6620]—Thomas Cromwell, Sawyerville, Quebec; Samuel Lake, Eaton.

H. Lady Hughive (vol. 9), by Prince Josephine [7662]—Wm Willmore, Chatham; C. G. Charters, Chatham.

H. Nora (vol. 9) by Pilot [9077]—Miram McFaul, Wellington; Nelson Cahoon, Picton.

B. Rob Roy, Jr. [12253], by Rob Roy [9254]—John McGregor, Blenheim; Charles Stover, Blenheim.

B. Jumbo Senator [12254], by Brampton Senator [6596]—James Farris, Bradford, Smith and Goodfellow, Bramley.

H. Maud (vol. 9), by Emperor [8592]—James Somerville, Elders Mills; James Farris, Bradford.

B. Sir Richard [12252], by Marquis of Wood Hill, Antrim [7467]—Mrs John Kennedy, Hyde Park; James Fisher, H²; Park.

H. Clarentine 7th (vol. 9), by Young Prince [3617]—Chas. A. W., Parkhill, And. Aiken, Parkhill.

B. Lord Londesborough [12272], by Duke of Kent [9877]—James Braithwaite, Londesborough; Henry Cottle, Londesborough.

H. Golden Drop 2nd (vol. 9), by Royal [11463]—Chas. Church, South Dunham, Quebec; John F. Gollop, Richmond, Quebec.

B. Young Model Duke [12932], by Model Duke [7480]—H. Glazebrook, Simcoo; R. H. Johnson, Lynn Valley.

B. Rob Roy [12300], by Rose Duke [9276]—Wm. Watson, Nassagaweya; John Taylor, Rockwood.

B. Buckhorn Duke 2nd [12397], by Commodore [9778]—Dr. J. McCully, Buckhorn; Thomas Plant, Woodslee.

B. Jumbo [12348], by Admiral [8061]—Wm. Bye, Elora; Daniel Isles, Egremont.

B. Dufferin [12310], by Minna Duke 2nd [8982]—Jas. Stirton, Calf Mountain, Man.; Rich. N. Lee, Pembina Crossing, Man.

B. Duke of Bayham [12353], by Duncan [8335], C. M. Simmons, Ivan; Summers Bros., Bayham.

B. Duke of Waterloo [12363], by Count Charming 3rd [9781]—Wm. G. Batters, Glenmorris; Matthew Wilkes, Galt.

B. Prospect [12364], by Lancaster Royal [11610]—J. and W. Watt, Salem; C. Pettit, Southend.

HANDY RURAL HINTS.

ONCE a week will do to salt the stock, but twice will do better.

CORN fodder well saved is nearly or quite equal to timothy hay, and is a valuable feed for all kinds of stock.

MANURE for wheat must be on or near the surface. This is true of manure for all crops. If buried deep it will be lost.

THE best potato, as to real value, is the one containing the largest percentage of solid nutriment, that is, starch and albumen. It is the starch that makes a potato cook dry and mealy.

PEACH and plum pits should not be planted in the fall, as many of them will germinate if allowed to remain out all winter. It is better to keep them indoors until spring, then crack and plant very early.

FARMERS are everywhere giving testimony to the efficacy of kerosene as a preservative of fence posts. Soak well with kerosene the portion going into the ground, and the post is not only well preserved, but insects are repelled.

THE demand for mutton, says the *N. Y. Times*, as an agreeable and cheap food is steadily increasing. The markets of New York alone require more than a million sheep annually. Farmers, too, who once used only bacon and pork, are becoming mutton eaters. The convenience of a few sheep on every farm to furnish the family with good, wholesome food, is now appreciated more than a few years since.

ATTENTION is directed to advertisement of Auction Sale of Fat Stock, the property of the Ontario Experimental Farm, which takes place at the Drill Shed, Guelph, on Wednesday evening, 17th December.

RENEW for THE RURAL without delay. If you want the *Western Advertiser* send us \$1.15; if the *Montreal Weekly Witness*, \$1.25; and if *The Canada Presbyterian* and *RURAL*, enclose \$2.00. Cheap reading, indeed!

YOUNG MEN—READ THIS.

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

THE HEREFORD BOOM.

The rapidly increasing popularity of the Hereford cattle, both in England and America, is a matter of the keenest interest to the beef producers in this country. The great Stoktonbury sale in England and the Kansas City sale here indicate an increasing demand for superior breeding. The Herefords are just establishing the family lines and the recent Carwardine sale clearly proves our theory of family breeding, namely, whatever breed of stock you have, adopt one good family, and in a term of years far more money, profit and business reputation is gained than by the promiscuous breeding of several families. In this sale the reputation of the herd was closely associated with the name of Lord Wilton, of which we spoke in connection with Mr. Adams Earl's herd in our August number. The herd indeed was advertised as the Lord Wilton Herefords, and this famous old bull sold for nearly \$20,000, and all of his breeding at proportionate prices. The increased demand at private sale from the Hereford herds in this country has already caused some prominent Hereford public sales to be abandoned for this year. The Hereford boom has gone all along the line, and prices of both private and public sales are higher than ever before known for these well-known beef cattle in both England and America.

A NEW VENTURE.

There are many farmers in Canada who desire to give their sons a good business education, yet owing to the great expense of sending them to a business college, have to rest content with the limited advantage within their reach, viz., the Local School. To such persons it would be of interest to know that their boys can now receive an entire course in book-keeping, business forms, etc., at a small outlay, and at their own homes. The Bryant & Stratton Business College of Buffalo have recently established what is known as The Correspondence Business School Department, the design of which is to give students, at their homes, thorough and systematic instruction in the special branches of a business education, without in any way interfering with their vocation, and at a moderate cost, and to supplement the work of other schools with a special course of business training adapted to the wants of business men in general, embracing the following subjects: Book-keeping, business forms, penmanship, commercial arithmetic, business law, letter writing, and shorthand, which will be taught by special instructions sent by mail to the address of the student at their own homes. The firm have issued a descriptive pamphlet with full information and rates which will be sent on application on receipt of stamp.

The Canadian Breeder is a handsome weekly, published at \$2.00 per annum. It promises to be an important addition to the periodical literature of the Dominion. We wish it every success.

We call the attention of our readers to the Enterprise Meat Choppers advertised in our present issue. The demand for these Choppers has attained such immense proportions that the manufacturers have been compelled to largely increase their facilities for making them, and we are assured that they are now being turned out at the rate of 2,500 per week, 150 hands being steadily employed on them. There can be no doubt as to the excellence of these Choppers, as they have been tested by the editors of nearly 100 agricultural papers, who have given them a hearty endorsement. We cordially recommend them to all our subscribers as by far the best machine of the kind ever introduced to public favour.

HOME CIRCLE.

HOW MRS. MARTIN MADE SOAP.

A TRUE STORY.

I am James Martin's second wife. There was a time in the remote past when I not only thought but said that I would be no man's second choice; if I could not be first, I'd be nothing. But time went on, and the day came when I was very glad to have James Martin make it possible for me to have Mrs. engraved upon my future tombstone. How it would have appeared to have an epitaph like this: "Sacred to the memory of Miss Sarah Ann Smart, aged seventy-five years!" Passers by would have exclaimed: "Aged seventy-five and not married! What an old cross-patch she must have been!" I now look forward to the time when visitors to our country graveyard will say: "Sacred to the memory of Mrs. Sarah Ann, *relict* of James Martin, aged ninety-three. Dear old lady! What a privilege to live to be so old and lovely as she was!" It was, indeed, a great day for me when James Martin changed my epitaph.

Well, when I found myself a married woman I determined to exert myself to the extent of my ability to please my husband. This I did not find very hard, as James was a reasonable man in most things. I had a woeful time, however, learning to make good bread and do up fine shirts; but after many frantic efforts and numerous mortifying failures, I conquered, and now when James wants to "take a stiff" he can do so as far as his shirt fronts are concerned, and he can ask a friend home to dinner without fear of having sour bread placed upon the table.

There was one thing, notwithstanding all my seeming success, that lay rather heavy on my mind. It was the fact that James' first wife, Eliza, had been a notable house-keeper. She answered fully the description Solomon gives of a thrifty house-wife. Having been born of parents belonging to that worthy class of people who came from Connecticut in early days, and who helped to make this Western Reserve what it now is, how could she be anything but a woman with "a faculty?" I fear I have striven harder to cultivate this "faculty" than I have tried to imitate her many Christian graces; and I often wondered if James ever noticed the difference between us, and why he never told me how Eliza did this or that.

For a long time I was happy, but my cross came at last. Eliza was cast at me with a vengeance, and all because I could not make soap! I am free to confess that whilst I was most tremendously drilled in the Shorter Catechism, my early education was entirely neglected so far as making soap was concerned. I felt obliged, however, to try and learn the fine art of soap-making. It came about in this way: James and I had kept house for some months, and my first siege of spring cleaning, with all the work considered needful at that joyous season, had been finished, as I thought, with reasonable completeness; but James noticed that I had not made soap. Then a listener might have heard the following dialogue:

"Sarah Ann, what do you do with your soap grease?"

"We don't have much. You know we use very little fat meat of any kind."

"Don't you have any waste grease?"

"Yes, a little. I don't throw it away. I am saving it, intending to exchange it for soap, if I can."

"Why don't you make it up yourself? We always made soap when we kept house."

I noticed that we, but, smiling sweetly, replied: "I don't know how to make soap."

"You don't! It is nothing to make soap."

"There is no place in your yard to hang a kettle; and besides, none of my kettles will hold more than two gallons."

"The kettles you have will answer very well, and you do not need to work out of doors. Eliza always made soap on the stove."

This was said with a "now that settles it" air, and it did settle it. I had seen many a kettle of soap made, and had a very distinct recollection of what a disgusting business it was. However, I said that as soon as I had grease enough I would try. No cat or old hen ever hated water more than I disliked any kind of grease, even golden butter or pure white lard becoming unpleasant, if I had to handle it; but I was not going to let Eliza, or any other woman, outdo me. Into my nice pantry went that fat crock, in order to have it near enough to catch every drop of anything likely to aid in making soap. In due time I had my five pounds of grease ready. Yet, anxious as I was to show that I too had a "faculty," I put off the evil day as long as possible, determining that when I did make soap it should be done out of doors.

At last the days grew so short and cold I could delay no longer, and besides, my reputation was suffering. So I told James if he would go to Mrs. Cline's with the wheelbarrow and fetch her big kettle I'd make some soap. That man's face was a study. It glistened with delight as I explained my plan for working out of doors, so as to keep the smell of stale fat, and the not less vile odour of boiling soap, out of the house. What did he care where it was made, so that the thing was done? He brought the kettle and offered help to hang it and "do all the hard part." It would have put any other lazy man out of breath just to watch James scurry about, getting wood, water, etc., ready. And what a rollicking fire he made!

Then I produced a long pole, and placing one end of it through the fence, we slipped the kettle over the other end and heaved it up on a barrel. I then went to work with my ball of potash, my five pounds of grease and three gallons of water, while James, seeming to think the soap was made, and that he had made it, went off on iron gray Jake for a ride.

There I stood for three long hours that cold November day, with the smoke filling my ears, eyes and nose, no matter on which side of the fire I stood. I had a shawl tied about my head, James' old barn overcoat on, and a pair of old buckskin gloves, and doubtless appeared like one of Shakespeare's witches, as I "danced round about the cauldron stout," trying to keep out of the smoke. At last I felt sure the work was finished, and covering the kettle, left it to cool.

The next morning anyone could see that I had soap—but such soap! It was coarse-grained, black, and the worst smelling stuff I ever had the misfortune to be near. I also had, besides soap, a bad cold, a very sore throat, and the pleasure of hearing a subdued man say, "Sarah Ann, I am ashamed. It came to me while I was riding yesterday how mean I had been. I do not wish you to make soap again, and I am sorry I seemed to find fault with you." He then went out and bought me a whole box of beautiful soap, all done up in nice waxed papers. He also insisted on my using some of the famous liniment he had bought when iron gray Jake sprained his shoulder. I told him I was not a horse, nor would I use horse medicine, but he seemed so anxious to do something for me that I applied some of the stuff to my throat, and was, to my surprise, soon relieved.

From this I learned two things—first, that a woman who does her own housework and the family horse are much alike in many respects, at least so far as regards their trials and tribu-

lations; and second, that they are often treated much the same by their owners, the horse, in some families, having the advantage.

Hæc fabula docet that those women who are so fortunate as to marry a widower, may be the happiest of women if they are a little prudent at the outset. A man who does not think kindly of his departed wife is not fit to be the husband of another one. Just be patient, O second wife, with the man who loves to recall how his mother did things when he was a little boy, or the pleasant ways of the wife of his early manhood. When he refers to these things do not resent it, for if he is a good man all will adjust itself, if it is through a kettle of soap.

DRYING PLANTS.

It is a profitable occupation for some member of the family to gain a knowledge of botany. The materials for its study lie at every one's door, and the expense and work attending the preparation of an herbarium is very slight. The study of any branch of natural history cultivates a habit of observation, and it seldom fails to return a good deal of valuable information. For the influence which such studies always exert upon the minds and habits of thought of young people they are always to be encouraged, if the inclination toward them naturally exists. Botany is easiest studied because its objects are everywhere and are easily preserved. A most invaluable aid to the botanist is an herbarium, not merely a collection of pretty flowers artistically pasted in a book, but good ample specimens of all the plants in one's neighbourhood, whether handsome or homely. The pressing of plants for beauty alone is seldom an educator. The object of an herbarium is to cultivate observation and to preserve a record of the life histories and distinguishing attributes of plants. The practice of pressing plants for purely decorative purposes in the parlour is not to be discouraged, of course. It is well to cultivate a taste for the beautiful, wherever it is found, but to dry a few pretty flowers, to paste them in a scrap book, and then to call them an herbarium, is a degrading of the scientific uses of collections which are properly designated as herbaria. An herbarium is never made for beauty; it is made for study. Botany is often brought into disrepute by the "herbarium" of a school girl. The herbarium and the true systematic work of the botanist is too often associated in the public mind with the simple idea of "dried posies."

For ornamental or for scientific purposes, however, plants are dried in the same manner, and leaving the distinctions of the two purposes, we may meet on the common ground of discussion of the means of preserving plants. To the botanist, a properly dried specimen is scarcely inferior to a live specimen for systematic study. In some cases it is even better. For ornament dried plants possess a characteristic beauty. They may be arranged in bouquets, or on some suitable background in imitation of a painting, and then be framed.

Select plants which are not wet, and before they wilt place them between driers. These driers are large blotting papers about ten by sixteen inches. Some of the more porous kinds of carpet paper, which may be procured at dry goods or carpet stores, make excellent driers. If the plants are not fleshy, and if set in the sun while pressing, ordinary newspapers may be used. The plants should not be laid in loose between the blotters, for as the driers are changed the specimens could not be moved without damaging them. It is therefore necessary to lay them between the folded leaves of thin manilla paper such as is used at tea stores. The thinnest sort should

be selected. It may be procured of most grocers or store keepers. The specimens can then be shifted from one drier to another with no inconvenience. One or two driers should be placed above each sheet of specimens, and on top of the pile a board and heavy weight should be placed. A pile of twenty or thirty driers may be made with convenience. It is desirable to set the whole press or pile in the sun, if the weather is clear and warm. The driers will usually need to be changed every day. When the plants are sufficiently dry to be taken out they will not feel moist to the fingers. If the specimen breaks upon being quickly bent it is another test of dryness. Dried plants are frequently subject to attack by a minute brown beetle. In such cases the specimens must be dipped in a solution of corrosive sublimate in alcohol, and again laid between dryers for a day or so. The length of time required for drying of plants varies much, from four to ten days being the average, depending upon the kind of plant and the humidity of the atmosphere. Some fleshy plants and most orchids require a greater length of time. The stems of cacti and other fleshy plants should be split before drying. It is also desirable to boil such plants before putting them in the press. They then dry speedily. They contain so much moisture that they will often grow in the press if this precaution is not taken. It is also necessary to boil specimens of firs and spruces to keep the leaves from falling off.

Very large plants are often difficult to dry satisfactorily. Leaves which are larger than the dryers may be folded, or they may be cut in two lengthwise and one-half dried. This half will illustrate all the characters of a symmetrical leaf. Very large flowers, like sunflowers, may be similarly treated. In most such cases, however, smaller leaves and flowers may be selected, which will illustrate the plant as well. Of large plants only a section of the stem can be preserved. The label must tell its size. Many plants, as orchids and some willows, always discolour in drying, and some entirely lose their colour.—*American Cultivator*.

THE CRUEL CROW.

The Australian crow must not be likened to the stately rook of Great Britain, for they want the majestic strut and altogether lack the rich bass "caw" of the British crow. Moreover, they live chiefly on carrion, but are both cunning and cruel enough to watch for and maim and kill weak or distressed animals that are unable to escape or defend themselves from them. They have been holding high holiday during the late drought, and have been the direct cause of the death of thousands of sheep and cattle that were weakened by the famine, and but for their cowardly assaults might have survived. I have often seen these hateful birds attacking cattle and sheep that had got bogged or become too weak to rise from the spot where they had lain down to rest. They first usually make an attempt to peck out the eyes, and when their victims endeavour to avoid their beaks in that direction other parts are assailed. Often I have found a weak sheep with both ears bleeding and partly eaten off; but more frequently have I seen one or both eyes destroyed and the sheep still alive. In such latter instances I have invariably pitied the injured creatures. One day during the continuance of the drought I noticed among other bogged sheep one stuck fast whose appearance appalled me. It was a ewe that shortly would have lambed, and had been attacked by the merciless crows, which (horrible to tell) had disembowled the yet living mother, exposing the limb of an unborn lamb. Of course I had no

choice but to destroy the mother and leave it to the malignant crows. The lambing season has begun here, but the trying period we have passed through has left the surviving ewes so weak as to endanger their lives unless the lambs are destroyed. Thus it will be seen how adverse are the times to flockmasters in this region. In the destructive process towards the lambs the crows are in any season active agents, but when the mothers are strong and well they can offer their young some defence. In such a season as this the helpless lambs become an easy prey of the pitiless crows, which wait upon the ewes in the moment of their extremity, and cruelly pick out the eyes of the lambs ere they have hardly been brought to the birth; and yet there are to be found some writers who put in a plea for the crows on the ground that they are insect-eaters, and live also on putrid carcasses. So long as they can get live chickens, ducklings, or can find living sheep or cattle that are unable to defend themselves from their cruel beaks they will avoid putrid meat. Since the glad some rain has fallen these malevolent birds are not so dainty as to their food, for the stock being able to get water everywhere, and in safe places the former dangerous spots are avoided, and hence there is no bogging to favour their relentless foes. These would, therefore, have to go without food if they did not now fall back on those carcasses that fell during the drought, or on other putrefactions. While it may be admitted that they do pick up grain and insects, and may be useful in the world in maintaining to some extent the balance of nature, my knowledge of them has led me to give them a very bad character—one full of cunning and cruelty.—*Glasgow Herald*.

THIS LIFE IS WHAT WE MAKE IT.

Let's oftener talk of noble deeds,
And rarer of the bad ones,
And sing about our happy days,
And not about the sad ones.
We were not made to fret and sigh,
And when grief sleeps to wake it,
Bright happiness is standing by—
This life is what we make it.

Let's find the sunny side of men,
Or be believers in it;
A light there is in every soul
That takes the pains to win it.
Oh! there's a slumbering good in all,
And we perchance may wake it;
Our hands contain the magic wand:
This life is what we make it.

Then here's to those whose loving hearts
Shed light and joy about them!
Thanks be to them for countless gems
We ne'er had known without them.
Oh! this should be a happy world
To all who may partake it:
The fault's our own if it is not.
This life is what we make it.

HOW MUCH SLEEP.

On this question, every one is a law unto himself. The only true rule is, take enough. Old Mother Means in "Eggleston's "Hoosier Schoolmaster," advised her husband when buying cheap land: "While yer gettin', get a plenty." So say we in regard to sleep, a full quantity of which is more valuable than the grandest farm the sun ever shone upon.

It is during the wakeful hours that the muscles and the nervous system and brain expend their energies. Muscles are partially recruited during the day by nourishment taken, but the great recuperating work of the nerves and brain is done during sleep. Such recuperation must at least equal the expenditure made through the day, or else the brain is ill nourished, wastes, writhes. Persons who in early English history were condemned to death by being prevented from sleeping, always died raving maniacs. Persons who are starved to death, suffer brain starvation also,

and pass into hallucination and then into insanity.

Get plenty of sleep, then. Better an hour too much than half an hour too little. Don't carry to bed a day's business, the supper of a gourmand, the whirl of a ball-room, or the cares that should be passed to God's merciful keeping. Free mind and body from these, lie down and rest in quietude, and so awake refreshed the next mornin' for the duties of the day.—*The Standard*.

THE MOUSE-EATING SPIDER.

About three years ago I succeeded in getting a live specimen at last, or rather three of them, all together in a nice box fronted with wire netting. I bought them from a native, who sells cigars and walking-sticks on the market wharf in Bahia, a town on the coast of Brazil.

For sometime after they commenced their voyage they ate nothing, though I put flies and cockroaches into their cage. Then I offered them bits of fresh-killed raw beef, which they seemed to suck; and then, as if this had whetted its appetite, to my great disgust one killed the other two and sucked them till only the dry shells were left of them, bloating itself visibly in the process.

When it began to get cold I filled up the box with hay, under which it retired and went to sleep, and in that condition was forwarded by rail from Southampton to the Zoological Gardens in London, where I next saw it in a splendid glass cage, labeled with a Latin name several inches in length, and composed expressly for it.

They called it the "mouse-eating" spider, because it seemed to prefer the bodies of young mice to anything else. At first it used to drain them of blood as vigorously as it had served its late companions, but after a bit it got to know there were more in the larder, and that it could have as many as it wanted, so it would cut out the top of the head with its sharp nippers, suck the brains and leave the rest.—*Pleasant Days*.

A JOURNEY TO THE SUN.

As to the distance of 63,000,000 miles, a cannon ball would travel it in about fifteen years. It may help us to remember that, at the speed attained at the limited express on our railroads, a train which had left the sun for the earth when the Mayflower sailed from Delfthaven with the Pilgrim Fathers, and which run at that rate day and night, would in 1884 still be a journey of nine years away from its terrestrial station. The rate, at customary rates, it may be remarked, would be rather over \$2,500,000, so that it is clear that we should need both money and leisure for the journey. Perhaps the most striking illustration of the sun's distance is given by expressing it in terms of what the physiologists call velocity of nerve transmission. It has been found that sensation is not absolutely instantaneous, but that it occupies a very minute time in travelling along the nerves. So that, if a child puts its fingers into the candle, there is a certain almost inconceivably small space of time, say the one-hundredth part of a second, before he feels the heat. In case, then, a child's arm was long enough to touch the sun, it can be calculated, from his own rate of transmission, that the infant would have to live to be a man of over a hundred before it knew that its fingers were burning.—*Prof. S. P. Langley, in the Century*.

Oil of wintergreen mixed with an equal quantity of olive-oil, when applied externally to inflamed joints affected by acute rheumatism, is maintained to be, on high therapeutic authority, a means of instant relief from pain. At any rate its introduction to the sick chamber is unobjectionable, if only for the agreeable odour it imparts to the atmosphere.

AUTUMN.

The leaves fall fast, the birds have flown,
And Winter's cold hand presses
The jewels of his frosty crown
On Autumn's golden tresses.

And by the southward flying flocks,
The heart with grief confesses
How soon death garners up the locks
His icy hand carresses.

When Autumn tells me I am old,
And care my life distresses,
May Winter's snowy robes unfold
A life that mankind blesses.—Whittier.

Many RURAL readers will be pleased to learn that they can secure the Montreal WEEKLY WITNESS—for many years so popular with thousands all over the Dominion—and THE RURAL CANADIAN, on remitting to this office \$1.25. Reader, promptly make sure of wholesome reading for your household for 1885. Balance of year FREE to new subscribers.

In Japan wheat is sown in rows, with wide spaces between them, which are utilized for beans and other crops, and no sooner is it removed than cucumbers or some other vegetable takes its place, as the land, under careful tillage and copious manuring, bears, two, and often three, crops in a year.

Young men and others will find our Premium offers in adjoining columns, worthy of consideration. Any one who has a little "go" in him may secure a good fowling-piece, rifle or double-barrelled gun, as the result of a few hours' work. There is no neighbourhood in Canada where a club can not easily be got up for THE RURAL CANADIAN. Attend to this little matter at once. "Work and win one of these valuable Premiums. The articles are guaranteed to be as represented.

A GARDENER recommends sowing onion seeds in the fall. Over the beds place some mulch for protection. Early onions may be thus secured.

By advertisement in another column it will be seen that we club THE CANADA PRESBYTERIAN with THE RURAL CANADIAN at the low price of \$2.00—with balance of year free to new subscribers. Both papers are well up to the mark, and afford excellent reading for a family. Specimen copies sent free on application.

We look with surprise on the many instances of swindling among farmers, because they sign their names unguardedly to an innocent-looking paper in the hands of a wily stranger. But the country has not the monopoly of careless signers. A man in a large town resolved to prove this. He drew up a petition to the Legislature, asking to have the pastor of the Presbyterian Church hung in the public square. He laid it on his office table, and asked visitors to "sign a petition favouring the widening of Oswego street." Most who were asked signed promptly without reading, among them two deacons of the church, and the pastor's son-in-law. A large list of signers was obtained before the facts leaked out. Then the men came back, one by one, and sheepishly asked to cross their names off. "Oh, yes, scratch them off," said the gentleman, "if you do not want the pastor hung."

RURAL subscribers are amazed at the \$1.25 offer. For this insignificant sum we send THE RURAL CANADIAN and WESTERN ADVERTISER for one year to any address. The arrangement we have made places the leading weekly family paper of the West, and the best farm and home magazine within the reach of every one who can read. Thousands, we feel certain, will promptly take advantage of the offer.

YOUNG MEN, ATTENTION!

NOW IS YOUR CHANCE!

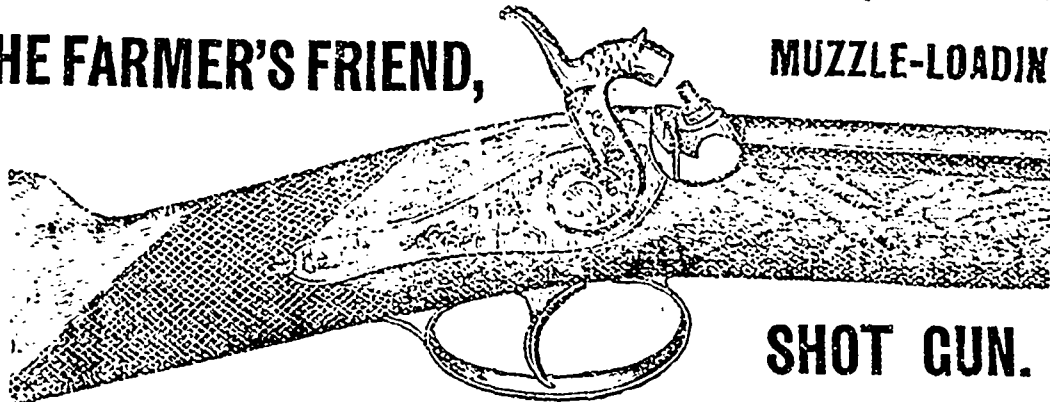
The Greatest OFFER ever made in CANADA.

FREE! FREE! FREE!

Any of the following FIRST-CLASS Firearms can be obtained FREE by any Man or Boy who will give a few of his spare moments or evenings in his own neighbourhood and among his own friends.

THE FARMER'S FRIEND,

MUZZLE-LOADING



SHOT GUN.

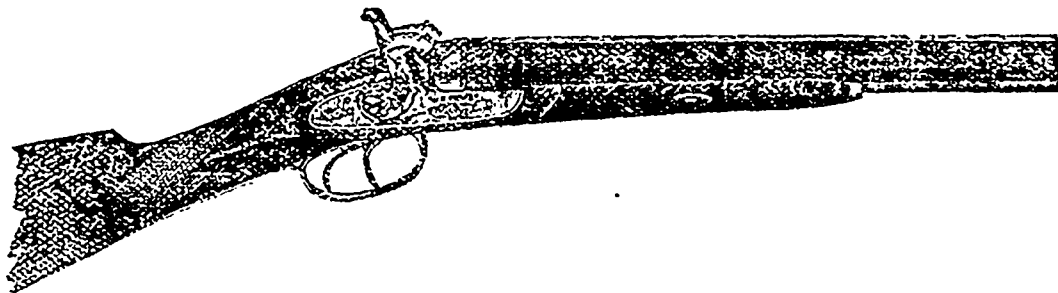
Single barrel, muzzle loader, fine de-carbonized blued steel barrel, small nipples, blued steel mountings and steel ramrod, made of first-class material. The lock of this gun is equal to that of a \$10.00 gun, and will outwear and outshoot any gun that is sold for \$10.00 in Canada. With bullet mould and steel wad punch.

To any one who will secure us NINE SUBSCRIBERS to the RURAL CANADIAN at \$1.00 each, and send name to us with cash enclosed, we will forward the splendid Shot Gun described above.

PRIMER-BREECH-LOADING RIFLE.

The barrel is made of de-carbonized steel and splendidly rifled; using the regular Spencer metallic cartridge; sighted to kill at 500 yards; positive and simple shell ejector superior walnut stock; case-hardened locks and mountings, 22-inch barrel; magnificent bar lock. No person who needs a good substantial sporting weapon should neglect this opportunity to secure a rifle which is in every respect reliable, substantial, well finished and accurate.

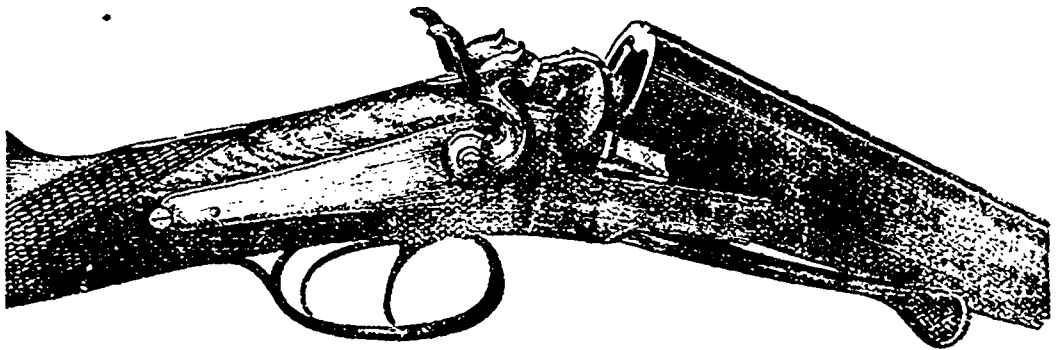
To any one who will secure us TEN SUBSCRIBERS to the RURAL CANADIAN at \$1.00 each, and send name to us with cash enclosed, we will forward this Superior Rifle.



THE SPORTSMAN'S FAVOURITE.

English Double Barrel Muzzle-loading Shot-Guns Good tested barrels, back action locks, fine polished stock, checkered in break-off, steel mountings and locks, ramrod with tip and extractor. Superior to any \$18.00 gun in the market.

To any one who will secure us FIFTEEN SUBSCRIBERS to the RURAL CANADIAN at \$1.00 each, and send name to us with cash enclosed, we will forward this much admired Double-barrel Shot Gun.



THE CELEBRATED RURAL CANADIAN DOUBLE BARREL BREECH-LOADERS.

Strongest, Safest, Simplest Breech-loading Gun in the world. The celebrated Lefauchoux action, while not quite as handy as a side or top action, can be operated as quickly. When this gun is closed it is as firm and strong as a muzzle-loader. Best de-carbonized steel barrels, patent automatic ejector, fine walnut stock, checkered hand, good locks, patent lever fore-end. We warrant this gun in every respect as safe, strong, durable, and a good, close, hard shooter, and any one who is satisfied with these qualities without extra fine finish will be more than satisfied with this gun.

To any one who will secure us TWENTY-FIVE SUBSCRIBERS to the RURAL CANADIAN for one year at \$1.00 each, and send name to us together with the cash, we will forward this High-class Breech-loader.

Remember this offer is open to all, and you can commence AT ONCE. You do not require any instructions from this Office, although we will be pleased to send you Sample Copies and Club List FREE on application. You run no Risk. You make no outlay. You can get up the Club at your leisure and in your own district. If you try for the highest prize and yet do not succeed in getting more than SIX, you can at any rate secure the FARMER'S FRIEND. You should note that this is the greatest offer ever made in Canada, for the prizes alone are worth almost the entire amount sent us for the subscriptions.

OPINIONS OF THE PRESS AND PEOPLE:

I like the RURAL CANADIAN, it is the best Agricultural Magazine published in Canada.—H. Mc G., Ottawa.
The music in the RURAL CANADIAN is worth the year's subscription.—A Lady Correspondent.
It contains a larger variety of practical information on agricultural subjects than I have ever met with in any similar publication.—H. A. Clifford, Muskoka Falls.
The best paper of the kind published in Canada to-day.—Durham News.
It will compare favourably with the best American journals of its class.—Sarnia Observer.
Don't delay! Commence work at once and a good Club is sure to be the result. Write for Specimen Copies to

G. BLACKETT ROBINSON,

Office of RURAL CANADIAN, - 5 Jordan Street, TORONTO.

Miscellaneous.

It is wise if you are going to put English currants into cake to dry them on a cloth by the fire after washing them, as sometimes the cold water will cause the cake to fall.

GRAHAM mush is a good substitute for a rich pudding on certain occasions. Make just as you do corn-meal mush, but add a few berries or raisins or English currants. Serve with milk and sugar.

MANY cooks consider it a great improvement on ordinary apple sauce which is to be served with roast goose or with pork, to rub it through a colander, and then to beat it with a spoon until it is very light and almost like pulp.

EVERY event in this world is a syllable breaking from the lips of God. Every epoch in affairs is a completed sentence of His thought; and the great stream of human history is God's endless revelation of Himself.

OATMEAL cakes may be successfully kept from crumbling if you add a little wheat flour to oatmeal mush; knead it, and then roll it quite thin and bake for half an hour in a hot oven. These must be kept where they will be dry, as they absorb moisture surprisingly, and are rendered unfit for use by it.

A GREAT MISTAKE. — It is a great mistake to suppose that dyspepsia can't be cured, but must be endured, and life made gloomy and miserable thereby. Alexander Burns, of Cobourg, was cured after suffering fifteen years. Burdock Blood Bitters cured him.

SELF-DISTRUST is the cause of most of our failures. In the assurance of strength there is strength, and they are the weakest, however strong, who have no faith in themselves or their powers. — Beeve.

THERE are some who are cowardly enough to trifle with or nibble at truth, but not bold enough to fling it away. It would be well for us to remember that not merely accepted error, but undervalued truth, has often made havoc of a church and shipwreck of souls. — Bonar.

CREAMED EGGS.—Boil six eggs twenty minutes, make one pint cream sauce. Have six slices of toast on a hot dish. Put a layer of sauce on each one and then part of the whites of the eggs, cut in thin strips; rub part of the yolks through a sieve on the toast. Repeat this and finish with a third layer of the sauce. Place in the oven for about three minutes. Garnish with parsley and serve.

A WISE CONCLUSION.—If you have vainly tried many remedies for rheumatism, it will be a wise conclusion to try Hagar's Yellow Oil. It cures all painful diseases when other medicines fail.

MEAT BALLS.—Meat balls to drop into soup stock are made of veal, with about one-fourth suet as veal, and with three fourths of bread crumbs, with salt, pepper and parsley, or other herbs to your taste; add one beaten egg, which will moisten and hold the ingredients together; make into round balls, drop into hot lard and fry quickly; drain them well on a cloth, and they are ready for the soup.

AN excellent dish for breakfast is made of six eggs and three tablespoonfuls of ham chopped very fine; beat the eggs, and after melting a lump of butter in the frying pan, drop the eggs into it and stir the ham in; the ham has of course been cooked, either fried or boiled; season with pepper. This is a good way to use up pieces of meat that are left from dinner.

SERIOUSLY ILL.—A person suffering with pain and heat over the small of the back, with a weak weary feeling and frequent headaches, is seriously ill and should look out for kidney disease. Burdock Blood Bitters regulate the kidneys, blood and liver as well as the stomach and bowels.

LEMONS cut in thin slices make a good garnish for broiled spring chicken. Another garnish, or more properly sauce, to be poured on the platter around the chicken is made by melting currant jelly. Take it out of the jelly tumbler, put it into a bowl and set it over the top of a tea-kettle which is almost full of boiling water; in this way you can escape all danger of burning it.

CONSUMPTION CURED.

An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellows. Actuated by this intolve and a desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp naming this paper, W. A. NOYES, 149 Power's Block Rochester, N.Y.

WORDS OF WARNING AND COMFORT.

"If you are suffering from poor health or languishing on a bed of sickness, take cheer

if you are simply ailing, or if you feel weak and dispirited, without clearly knowing why, Hop Bitters will surely cure you.

If you are a minister, and have overtaxed yourself with your pastoral duties, or a mother, worn out with care and work, or a man of business or labour, weakened by the strain of your every day duties, or a man of letters, toiling over your midnight work, Hop Bitters will most surely strengthen you.

If you are suffering from over-eating or drinking, any indiscretion or dissipation, or are young and growing too fast, as is often the case,

"Or if you are in the workshop of the farm, at the desk, anywhere, and feel that your system needs cleansing, toning, or stimulating, without intoxicating, if you are old,

blood thin and impure, pulse feeble, nerves unsteady, faculties waning, Hop Bitters is what you need to give you new life, health, and vigour."

If you are costive, or dyspeptic or suffering from any other of the numerous diseases of the stomach or bowels, it is your

own fault if you remain ill. If you are wasting away with any form of Kidney disease, stop tempting death this moment, and turn for a cure to Hop Bitters.

If you are sick with that terrible sickness, Nervousness, you will find a Balm in Gilead in Hop Bitters.

If you are a frequenter, or a resident of, a miasmatic district, barricade your system against the scourge of all countries

—Malaria, Epidemic, Bilious and Intermittent Fevers by the use of Hop Bitters.

If you have rough, pimply, or sallow skin, bad breath, Hop Bitters will give you fair skin, rich blood, the sweetest breath and health. \$500 will be paid for a case they will not cure or help.

A LADY'S WISH,

"Oh, how I do wish my skin was as clear and soft as yours," said a lady to her friend. "You can easily make it so," answered the friend. How?" inquired the first lady.

"By using Hop Bitters that makes pure, rich blood and blooming health. It did it for me as you observe."

None genuine without a bunch of green Hops on the white label. Shun all the vile, poisonous, stuff with "Hop" or "Hops" in their name.

Can't Keep House

BOWMANVILLE, ONT., Dec. 5, 1882. Messrs. SETH W. FOWLE & SONS, Boston.

Dear Sirs:—We suppose it is no new thing for you to receive congratulations on the success of your valuable cough remedy, **DR. WUSTMAN'S BALM FOR WHEEZING & BRONCHITIS**; but perhaps at this time a word or two from us will not prove out of place. Although the Balm has not been advertised to any extent in this locality, our sale of it is very large and the demand is increasing, which is due to the universal satisfaction which it gives to our customers. We have never had a single complaint, and the husbands tell us their wives will not keep house without it. We would like you to do a little more advertising in this county, for we believe were your Balm better known, its sale would be increased tenfold. Yours truly,

SCOTT & JURY, "The Druggists."

Humphreys' Homeopathic Specific No. 28
In use 30 years. The only successful remedy for Nervous Debility, Vital Weakness, and Prostration from over-work or other causes. \$1 per vial, 3 vials and large vial powder, for \$5. Sold by Druggists. Sent by mail on receipt of price. Address Humphreys' Homeopathic Medicine Co., 109 Fulton St., New York.

FAT CATTLE FOR SALE!

The Ontario Experimental Farm

WILL SELL BY PUBLIC AUCTION, ON DECEMBER 17th, 1884,

At the Drill Shed, Guelph, the following YOUNG, PRIME

CHRISTMAS STEERS.

- Lot 1—"Dudley"—Short-Horn Grade, 3 years old exactly, and calculated to weigh 1350 lbs. on day of sale 1.78
 - Lot 2—"Derby"—Short-Horn Grade, 2 years 9 months old, and calculated to weigh 1600 lbs. on day of sale 1.90
 - Lot 3—"Huntington"—Hereford Grade, 2 years 8 months old, and calculated to weigh 1700 lbs. on day of sale 1.75
 - Lot 4—"Aboyne"—Aberdeen-Poll Grade, 2 years 5 1/2 months old, and calculated to weigh 1650 lbs. on day of sale 1.85
 - Lot 5—"Harford"—Hereford Grade, 2 years 1 1/2 months old, and calculated to weigh 1640 lbs. on day of sale 2.12
 - Lot 6—"The White Prince"—Short Horn Grade, nearly 2 years old and calculated to weigh 1530 lbs. on day of sale 2.10
 - Lot 7—"Ledy Olive"—Short-Horn Grade 1 year 9 1/2 months old, and calculated to weigh 1250 lbs. on day of sale 1.93
- An average of 1600 lbs in 2 years and 4 1/2 months, or almost 2 lbs per head, per day.

The Sale will take place on the evening of Wednesday, 17th December, in the Drill Shed, Guelph, after the judging at the Agricultural and Arts and Guelph Fat Stock Show there.

No Reservation whatever. Terms Cash.

For further particulars apply to WM. BROWN, Ontario Experimental Farm, GUELPH

THE "LONDON ADVERTISER."

ESTABLISHED 1863.

A BRIGHT, READABLE NEWSPAPER, Containing complete telegraphic despatches from the Old and New Worlds, latest market reports, News of the Day, political and general.

HON. D. MILLS, Editor-in-Chief.

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Both Daily and Weekly editions of THE ADVERTISER are rapidly increasing in circulation and are acknowledged to be the handsomest newspapers in Canada.

MARRIAGE CERTIFICATES, Suitable for any Province, and may be used by the clergyman of any denomination, beautifully printed on fine heavy paper in carmine, blue and gold, constantly on hand, 50 cts. per dozen Twenty-five copies mailed to any address, free of postage, for ONE DOLLAR. G. BLACKETT ROBINSON, Drawer 8092, Toronto Office—5 Jordan Street.

DISEASE BANISHED

Health Gained, Long Life Secured, BY USING

KIDNEY-WORT

It Purifies the Blood, It Cleanses the Liver, It Strengthens the Kidneys, It Regulates the Bowels.

TRUTHFUL TESTIMONY.

KIDNEY DISEASES. "I suffered 12 years and night with Kidney troubles, my feet were chalky and bloody, I could get no relief from doctors. Kidney-Wort cured me, I am as well as ever. FRANK WILSON, Peabody, Mass.

LIVER COMPLAINT. "I could not be with out Kidney-Wort (it cost \$10, it cured my Liver and Kidney troubles after I had lost all hope. SAM'L HODGES, Williamstown, Vt.

PILESI PILESI!! "I suffered for 12 years from Piles, as none but those that have been afflicted can realize. Kidney-Wort quickly cured me. LYMAN T. ABELL, Guelph, Vt.

CONSTIPATION. "I was a great sufferer from diseased Kidneys and was terribly constipated for years. I am now as healthy as well as ever I was in my life, and it is due alone to Kidney-Wort. C. P. BROWN, Westport, N. Y.

RHEUMATISM. "After suffering for thirty years from Rheumatism and Kidney troubles, Kidney-Wort has cured me. ELURIDGE MALCOLM, West Bath, Me.

FEMALE COMPLAINTS. "Kidney-Wort has cured my wife after two years suffering and weakness, brought on by use of a Sewing Machine." DR. C. M. SUMMELIN, Sun Hill, Va.

FOR THE BLOOD. "The past year I have used Kidney-Wort more than ever, and with the best results. Take it all in all, it is the most successful remedy I have ever used." PHILLIP C. BALLOU, M. D., Moncton, Pt.

MALARIA. "Chronic Malaria for years, with liver disease made me wish for death. A European trip, doctors and medicine did no good, until I used Kidney-Wort—that CURED me." HENRY WARD, Late Col. 69th Reg., N. G. S. N. Y., Jersey City, N. J.

It acts at the same time on the KIDNEYS, LIVER and BOWELS stimulating them to healthy action and keeping them in perfect order. Sold by all Druggists, Price \$1.00 Liquid or Dry. The latter can be sent by mail.

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KIDNEY-WORT

A MILLION A MONTH

THE DIAMOND DYES, have become so popular that a million packages a month are being used to re-color dyes of faded DRESSES, SUITS, HATS, STOCKINGS, APRONS, &c. Warranted fast and durable. Also used for making inks, staining wood, coloring Photo's, Flowers, Grasses, &c. Send stamp for 32 colored samples, and book of directions. WELLS, RICHARDSON & CO., Burlington, Vt.

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ESTIMATES FURNISHED ON APPLICATION

PRESBYTERIAN Printing & Publishing COMPANY,

5 Jordan Street, - TORONTO.

YOUNG CANADA.

NO 1

Somebody asked me to take a drink,
What did I tell him? What do you think?
I told him—No.

Somebody asked me one day to play
A game of cards; and what did I say?
I told him—No.

Somebody laughs that I will not swear,
And lie, and steal; but I do not care:
I told him—No.

Somebody asked me to take a sail
On the Sabbath day: 'twas of no avail;
I told him—No.

"If sinners entice thee, consent thou not,"
My Bible said, and so on the spot
I told him—No.

RIDING ON A NILE CROCODILE.

AN ADVENTURE IN THE SOUDAN.

"What a queer craft! I'm glad I haven't got to go up to Khartoum in a thing like that."

So spoke a bearded, brown-faced English officer, who was standing upon the bank of the Upper Nile, close to the Arab village of Shendy, midway between Berber and Khartoum, was wondering how long the "Abbas" (the Egyptian steam launch in which he was working his way up the river to join Gen. Gordon) would contrive to be in taking her wood on board before going on.

While staring about him from under his big, white, sun helmet at the box-shaped, flat-roofed, tumble-down mud-hovels of the village, the ten or twelve shirveled old Arabs who were sitting under their screens of dried grass in the middle of the vast, dreary market place, and the spongy white cheese, sticky dates and brown, soap-like cakes of bread which they were offering for sale, a new object suddenly caught his eye. This was an Arab ferry boat coming across the Nile from Metemmeh, a smaller village on the opposite bank.

Certainly it was a "queer craft," and he might well be glad that he had not to make a long voyage in it. It was a big, clumsy, flat-bottomed barge, almost as broad as it was long, and steered by a gaunt, half-clad Arab with something that looked very much like an over-grown wooden shovel. But the rigging was more curious still. A tall, bony native, standing bolt upright upon the deck, served as a mast, while the piece of coarse canvas which he held up at full length in his outstretched hands did duty for a sail. This living mast was kept in its place by two other men, one of whom clasped it around the waist, while the other held on to its knees with all his might and main.

But just at that moment the Englishman's attention was drawn away from the boat by another object much more interesting to such a veteran sportsman. There was a sudden rippling and bubbling a little way up the stream, and then up through the thick, brown, greasy water came a huge, bluish-gray mass (not unlike an enormous plum) which the officer's keen eye knew at a glance as the broad back of a hippopotamus!

Out came the revolver instinctively although at that distance he had no more chance of piercing the beast's tough hide with a pistol bullet than if he had thrown a peanut at it. But before he could fire, the monster dived again, while at the same instant a sudden clamour of shrill cries turned his attention back to the ferry-boat, where a very unexpected sight met his eyes.

To use living rigging is not always a safe experiment, and in this case it proved very unsafe indeed. A sudden gust of wind took the sail aback,

and the Arab who was serving as a mast for it, and who had planted his feet upon the two lower corners of the canvas in order to keep it stretched to its full extent, found himself entangled in it almost before he knew what had happened. Losing his balance he fell backward, and rolled over the edge of the boat into the water, dragging along with him one of the two men who had been holding him up.

The other man scrambled back into the boat almost as quickly as he had tumbled out of it; but the mast-man was not so lucky. It took him two or three seconds to get rid of the canvas that was hampering him, and those two or three seconds made all the difference. By the time he had got clear, the ferry-boat had drifted a good way down the stream, the steersman having left his post and run forward when he saw his comrades fall overboard.

This of itself would have mattered little, for every Arab in the Nile valley can swim like a duck. But while the struggling man was swimming with all his might toward the boat, and the steersman was working the boat's head round to meet him, a new actor suddenly appeared on the scene, whose coming made the affair look much more serious.

No one had taken any notice of a long black log which was lying on the edge of the sand-bank a little way out in the stream. But at the splash made by the two Arabs as they plunged overboard, the seeming log made a sudden movement, displaying as it did so the vast, scaly bulk, grinning teeth, and small, cunning, cruel eye, of a monstrous crocodile!

The hideous creature waddled down into the river so clumsily that any one who had been watching it would have been startled by the arrow-like swiftness of its course the moment it touched the water. The poor Arab knew only too well what was in store for him, and made frantic efforts to reach the boat, which was now close at hand. But the monster was too quick for him. Gliding in between him and the approaching barge, it spun round suddenly and darted right at him, opening its jaws wide enough to show two ranges of spiky teeth that might have crushed a buffalo.

But just as all seemed over, one of the ferry-men took a flying leap from the side of the boat and came plump on to the crocodile's back. There he stuck like a limpet, while the long, sharp, jambayah (dagger) in his right hand dealt stab after stab into the monster's undefended side, just behind the fore-shoulder.

Could the crocodile have spoken, he would probably have cried out: "Foul play! Two against one!" As it was, he showed his disgust plainly enough by his savage snortings and the furious lashings of his ponderous tail, till, finding that his enemy was not to be shaken off, he plunged suddenly under the water. Man and beast went down in a whirling eddy, the ripples of which were dark with blood.

A cry of dismay burst from the crowd that had gathered upon the bank, as they saw the brave Arab disappear. But all at once the water began to heave and bubble as if some fierce struggle were going on in the depths below, and the Mussulman's lean, dark face rose again to the surface, upon which, a moment later, the crocodile's mighty bulk floated limp and dead, slain by a mortal stab in the throat.

"*Aferin, ya habibi*" (Well done, my friend,) cried the Englishman, as the conqueror struggled ashore. "Here are twenty piastres (fifty cents) for you, if you can accept the gift of an unbeliever."

"No matter for that, offendi," (gentleman,) replied the Arab, with a grin, tying up the coins in

the greasy waistcloth which was his only clothing. "You may be an unbeliever, but your money is true Mohammedan, anyhow."—*David Ker in Good Cheer.*

THE BROKEN BOTTLE.

"Come on, boys, let us go in and take a parting drink."

The speaker was William Scott, a hard-working mechanic, who, with three of his shopmates, was on his way home at the close of the week's labours. All of them had taken several drinks, and were beginning to show the effects of it, especially Scott, who staggered slightly as he walked. The four went in and stood before the bar of the saloon, which was a short distance from Scott's home, and had for years been patronized by him. Drunken men seldom drink and leave a saloon when there are two or more together; and on this occasion Scott and his friends stood at the bar and conversed as one after the other treated in turn.

Suddenly their conversation was interrupted by Scott accidentally dropping the bottle, from which he was about to pour a dram, from his unsteady grasp.

"Hallo!" said he, "that was an accident."

"Accident or not, you'll pay for that liquor and bottle," retorted the saloon keeper, whose attention was directed to Scott by the crash.

"You don't mean that, Lawrence?" said Scott. "It was an accident."

"That's all right," replied the saloon keeper, "but the price of that bottle and liquor will take the profit off many a drink; I can't afford to lose it, and you'll have to pay it."

"But," pleaded the mechanic, "I've but a dollar of my wages left, and I must take it home."

The saloon keeper, however, was inexorable, and Scott handed over the dollar note which was to have given his wife and little ones a Sunday dinner.

When he got his change he turned to the saloon keeper and said: "I didn't think you would do that, Lawrence, after I have been spending a good part of my wages here for the last ten years."

"Well, if you have, I guess you got the equivalent of every cent you spent," gruffly responded Lawrence.

"Did I?" said Scott, quietly, and picking up the pieces he started from the saloon.

There was something in his manner that Lawrence did not like, and taking the amount he received from the mechanic from the drawer, he threw it noiselessly on the counter, and called to Scott to come back, but the latter had reached the door and gone out.

He proceeded direct to his home, and meeting his wife he placed the pieces of broken bottle in her hand, saying:

"There, Betty, I have paid several hundred dollars for that, and I think you'll consider it cheap before we get through."

Mrs. Scott did not for a moment understand him, but looking at the pieces of the bottle and inhaling the fumes of the liquor, she intuitively grasped his meaning, and with a glad feeling in her heart she said:

"What do you mean, William?"

"I mean," said Scott, "that for ten years that bottle has been swallowing my earnings; but now I've bought it, and I am going to see if the broken bottle is not better than the whole bottle."

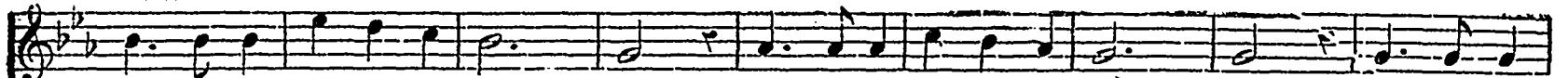
Scott kept his promise. He never drank again, and in after years, when he had a comfortable little home and a profitable business of his own, he always told his friends that it all came through "the broken bottle."



A GIFT OF FLOWERS.

WHISPERING HOPE.

dolce.



Soft as the voice of an an - gel, Breath-ing a les - son un - heard,..... Hope with a
If in the dusk of the twi - light, Dim be the re - gion a - far,..... Will not the

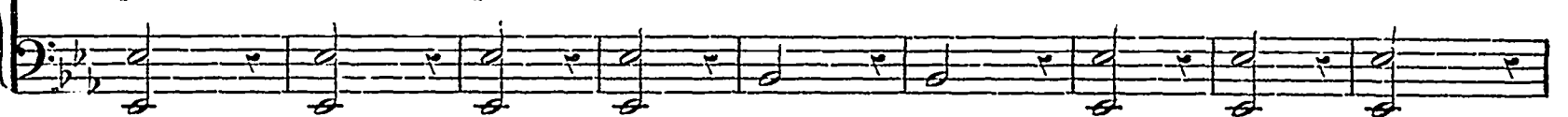
dolce.



Soft as the voice of an an - gel, Breath-ing a les - son un - heard,..... Hope with a
If in the dusk of the twi - light, Dim be the re - gion a - far,..... Will not the



p *cres.* *p*



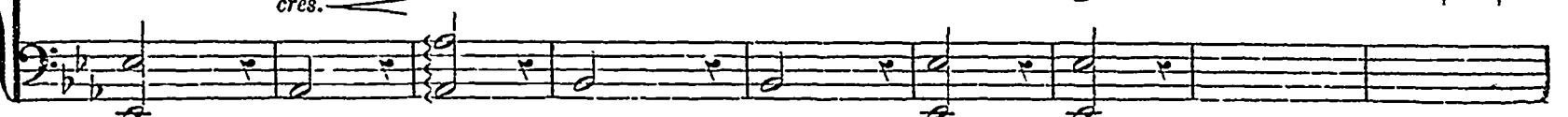
gen - tle per - sua - sion, Whis - pers her com - fort - ing word;..... Wait till the dark - ness is
deep - en - ing dark - ness, Bright - en the glim - mer - ing star?..... Then, when the night is up -



gen - tle per - sua - sion, Whis - pers her com - fort - ing word;..... Wait till the dark - ness is
deep - en - ing dark - ness, Bright - en the glim - mer - ing star?..... Then, when the night is up -



cres.



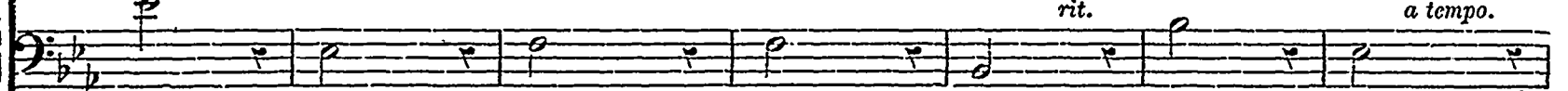
o - ver, Wait till the temp - est is done,..... Hope for the
on us, Why should the heart sink a - way,..... When the dark



o - ver, Wait till the temp - est is done,..... Hope for the
on us, Why should the heart sink a - way,..... When the dark



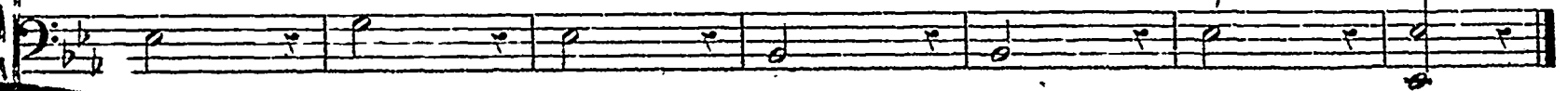
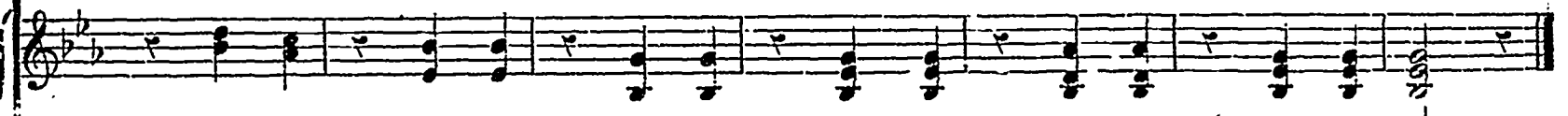
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sun - shine to - mor - row, Af - ter the show - er is gone.....
mid - night is o - ver, Watch for the break - ing of day.....



sun - shine to - mor - row, Af - ter the show - er is gone.....
mid - night is o - ver, Watch for the break - ing of day.....



rit.

a tempo.

rit.

a tempo.

rit.

a tempo.

Whis - per - ing Hope, Oh! how wel - come thy

Whis - per - ing hope, Whis - per - ing hope, Wel - come thy voice, Oh! how

voice, Mak - ing my heart in its

wel - come thy voice, Mak - ing my heart, Mak - ing my heart in its

sor - row re - joice Whis - per - ing

sor - row re - joice Whis - per - ing Hope,

hope, Oh! how wel - come thy voice,

Whis - per - ing hope, Wel - come thy voice, Oh! how wel - come thy voice,

Mak - ing my heart in its sor - row re - joice

Mak - ing my heart, Mak - ing my heart in its sor - row re - joice

MUSICAL.

From the Boston Evening Traveller.

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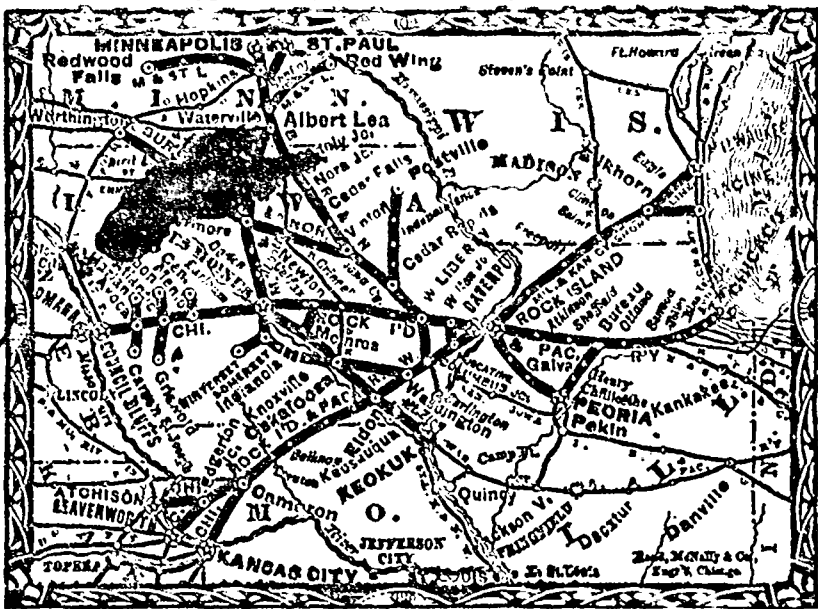
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Imperial Standard

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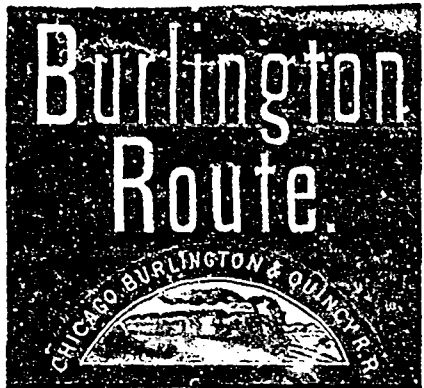
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TORONTO'S ONE PRICE DRY GOODS HOUSE!

We will not be Undersold by any house in the Trade, as we buy at the Fountain-head of production, and sell on the smallest living profit. All goods marked in plain figures and no second price. TERMS STRICTLY CASH. We only sell such goods as can be safely recommended to our customers.

See our Dress Goods.

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See our Dress and Mantle Silks.

See our Plain and Brocade Velvets.

See our Jackets, Ulsters and Dolmans.

See our Stock of Cloths and Tweeds.

See our Trimmed and Untrimmed Millinery,

See our Gloves, Hosiery and Under-clothing.

We offer you a \$75,000.00 stock to select from, and it will repay you to come 100 miles in order to buy from us, as you will save money every time.

J. M. HAMILTON,

184 Yonge Street (third store above Queen),

TORONTO.

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 blighted corpuscle of tubercle, the germ poison of syphilis, mercury, toxæmia, from the retention of the effete matter of the skin, suppressed perspiration, badly ventilated sleeping apartments, and other poison; 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.

What the Rev. E. B. Stevenson, & A. A. Clergyman 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, OAKLAND, ONTARIO, CANADA, March 17, 1883.
Dear Sirs:—Yours of the 13th last 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.