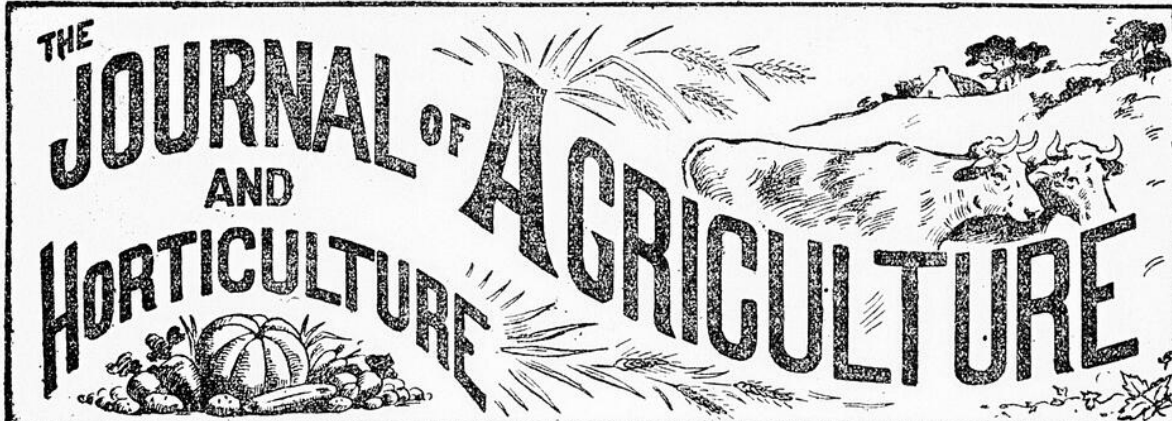


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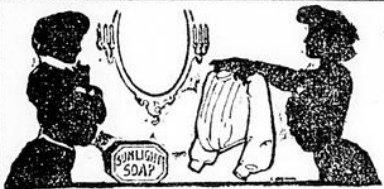


VOL. 7, No. 9 Circulation, 60,000 = (ENGLISH, 6,000 / FRENCH, 54,000) NOVEMBER 1st, 1903

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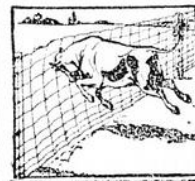


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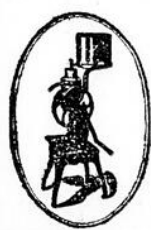
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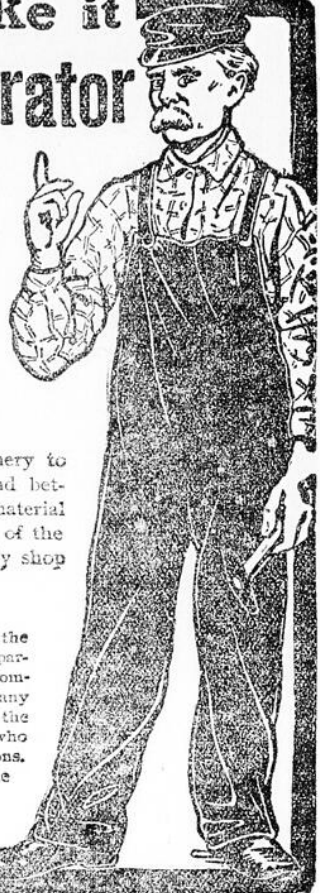
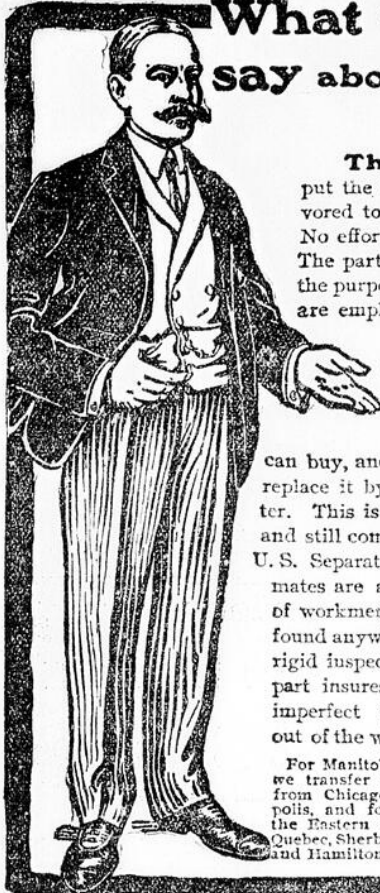
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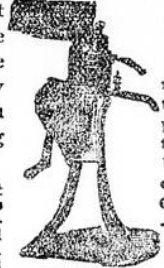
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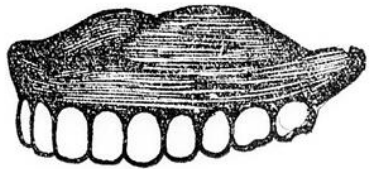
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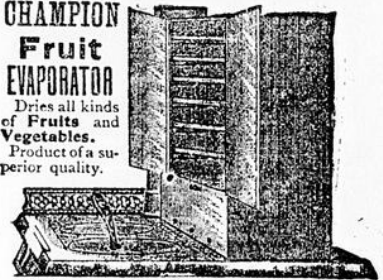
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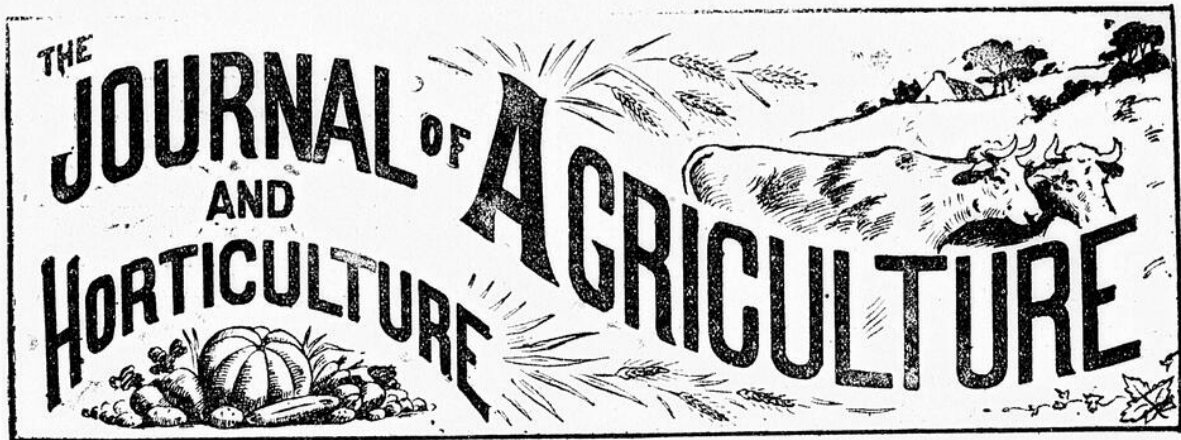
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VOL. 7, No. 9

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NOVEMBER 1st, 1903

The Journal of Agriculture and Horticulture

The Farm.

"The Journal of Agriculture and Horticulture" is the official organ of the Council of Agriculture of the Province of Quebec. It is issued bi-monthly and is designed to include not only in name, but in fact, anything concerned with agriculture and Stock-Raising, Horticulture, etc. All matters relating to the reading columns of the Journal must be addressed to Arthur R. Jenner Fust, Editor of the "Journal of Agriculture and Horticulture," 4 Lincoln Ave. Montreal. For rates of advertisements, etc, address the Publishers

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NOTES BY THE WAY.

"Riding".—The word riding, in English society, designates in one word the act of mounting on a horse, exactly what the French call "monter à cheval", and is never applied to travelling in a carriage by wellbred people. Macaulay is the only writer of modern days, of all that have mixed in good society, that thus misuses it. The Americans talk of "taking a boat-ride", but they need not be taken as models of polite diction.

Nothing struck us so forcibly, on our arrival in this country as the almost universal practice among the farmers, both in Ontario and Quebec, of driving, in four wheeled carriages too, about their farms and along the rough country-roads. Why, on earth, they gave themselves the trouble of cleaning a vehicle as well as a set of harness, for they did clean them sometimes, if only once a week, as well as a horse, we could not conceive; but, so it was in both provinces, and we never could extract a reason for the practice from any one of them, except that it was the custom of the country.

An English farmer gets on horse-back in the early morning; visits his men at plough, gives a look at his sheep, at his cattle, his men, at work on ditches, &c., rides home to breakfast, and repeats his tour of the farm two or three times before sunset, beside, perhaps, paying a short visit

to the nearest market-town. Our old friend Sam. Jonas, of Ilkleton, Cambridge-shire, kept three hacks in full work, but then he was a heavy man and farmed 2,200 acres, all under the plough, and a farm of that size (or rather three farms with a bailiff over each) takes a good deal of looking after. Much chance Jonas would have had to get through his day's work on wheels !

We were led to make this little excursus by a very sensible paragraph we met with in one of our exchanges, "The Farming World", which passage we append hereto :

THE SADDLE FOR BOYS AND GIRLS.

If farmers would provide suitable appointments for saddle work, and encourage their boys to ride more and drive less, they would become fond of the exercise and good riders. At the same time, he should not neglect his daughters ; he should also provide them with saddles. There is no exercise so good for either boys or girls as saddle work, nor none that the young folks (with few exceptions) enjoy so much. The pleasure can also be made profitable. If a saddle horse is well trained the farmer does not need to sell to the dealer, but can get the dealer's price from the consumer. A saddle horse of the proper size and conformation, that can be recommended as a lady's horse, will sell for double the amount that he is worth green, and there is no reason why the breeder should not receive this profit in addition to rendering his daughters a great deal of pleasure and healthful exercise in training the colt.

By the bye, we do not talk of a "saddle horse in England but of a "riding-horse", and no man who knows the real pleasure of riding a well-bred, well-broken horse, whether on the road or with the hounds, ever dreams of putting his riding-horse into harness ; which is the reverse of the opinion so stoutly held by our great friend (and the friend we hope of our readers, too) Mr. David Harum, who says, in his deal with Miss Claricy who needs a riding-horse, and proposes to try one of his :

"I guess 'I did not buy him for a saddle-horse, and if I'm to own him for any length of time, I'd rather he'd fergit the saddle-business." If you have not read the book, get it, and you will thank us for our advice when you have read it.

Oh, ride, our young friends, and keep your driving for market-days and Sundays !

"Corn".—Corn, in England, when used to express one specific sort of grain, always means oats, though we saw, in a Montreal paper last month, that it meant wheat. Our corn is called there either "Indian Corn" or "Maize"

NINETY BUSHELS TO THE ACRE

"Ninety bushels of oats to the acre in an extreme instance of excellent crops, where all were good. It was in travelling through Ontario last month that Mr. Stewart, general manager of the Sovereign Bank, was shown the field this enormous yield came from."

Of course 90 bushels is a good crop of oats, but nothing wonderful. In or about 1870, Mr. Clare Sewel Reed, an extensive Norfolk farmer grew, on eleven acres, 1320 bushels, or 120 to the imperial acre. Our farm tutor, Wm. Rigden, on his farm at Hove, Sussex (now grown over, not with crops but with houses), 140 bushels. We, ourselves, never exceeded 114 bushels, and they were grown on a small piece of old garden-ground. In Scotland, 60 bushels is accounted a good yield on an acre, but it must be remembered that, whereas a bushel of Scotch oats often weighs from 42 to 45 pounds the heavy crops of oats grown in England, as above, did not probably exceed 37 or 38 pounds. Mr. Rigden's great yield, indeed, as we well remember, did not go over 34 lbs. They were "White Tartars", and they never weigh well. Once, and only once, we saw a sample, that won the first prize at the great Exhibition of 1851, that weighed 48 lbs, but they were suspected of being "hand-picked" ?

"Woodcocks".—The "great owl woodcock" evidently does not visit the States and Canada, or "The Farming World" editor has never been fortunate enough to kill one :

"Woodcocks vary a good deal in size, the females being rather the larger. A fair average bird will weigh about six and one half ounces. I have shot them weighing from five ounces to seven ounces and three quarters, the latter weight being rarely exceeded."

In the Hall at Wenvoe Castle, Glamorganshire, South-Wales, we have often seen a case containing a stuffed woodcock, that, when shot, weighed 14 oz. avoirdupois ; but ten and twelve ounces were no uncommon weights there even in our time.

WHAT A 1,200 lb. BULLOCK SHOULD YIELD.

The Armour Packing Company, of Kansas City, gives the following itemized statement of what a 1,200 lb. bullock should yield : Hide, 75 lbs.; head, feet, and knuckles, 45 ; fat, 80 ; liver, heart, and lungs, 35 ; cheek meat and tongue, 10 ; coarse fat and entrails, 84, liquid blood, 46 ; paunch and contents, 106 ; lip and weasand meat, 4 ; tail, trimmings, and casings, 15 ; dressed carcass, 700.

We rather think that the Armour people must have been dealing with incompletely fattened cattle when they gave out the above table. Surely a well-fed beast should yield at least 60 p. c. of carcass when slaughtered ; that would mean 720 lbs.

A Deputation of the tenants on the estate of the Duke of Leinster waited on the agent in Dublin on Thursday and submitted offers for purchase which were accepted. Lord Frederick Fitzgerald referred to the regret with which the family consented to part with the estate. They were, he said, the first to become landlords in Ireland, and they were the first to sell

under the new Land Act. After a conference of half an hour's duration, the following terms were agreed to :—(1) The tenants to buy at twenty-five years' purchase of the second-term rents or their equivalent. In the case of first-term rents, it was previously understood that these should be reduced by 12 1-2 per cent.; in order to bring them to the second-term level. (2) All arrears up to March, 1903, to be added to the purchase money. (3) The gale due on September 29th and November 1st, 1903, to be forgiven. (4) Payment of interest on the purchase money to commence from September 29th, 1903. (5) Sporting rights to be reserved to the Duke of Leinster, but not to be leased. It was mentioned during the conversation that took place that the arrears on the estate did not amount to more than £2,000. It is understood that the bonus which the Duke of Leinster will receive under these terms of purchase will amount to £148,000, the total amount received by him, including purchase money and bonus, being £1,381,333 odd.

THE RISING SON.

Mr. Punch has once a very amusing sketch of a growing lad who had for years been in the habit of wearing his father's half-worn habiliments and had at last reached the stage of development when the old man's pants only reached half way to his ankles, and the sleeves were bidding good-bye to the young fellow's wrists. We may take the liberty of using Mr. Punch's picture to contrast the development of the exhibitions of the Royal Agricultural Society of England with that of the growing colonial exhibition known among ourselves as the Winnipeg Industrial. A few weeks ago the parent society opened its first show in the park a few miles west of London, which the wisdom of its directors has selected as a permanent home for its annual gatherings, in preference to the old plan of moving round from place to place to approved centres which were always

ready to welcome such a show. Most of those local exhibitions were a success financially and otherwise, and in one case, the Manchester show, in 1896, drew 218,000 paying visitors.

It was expected that the nearness to London of the permanent site, with the added attraction of visits from Royal personages, from King Edward downwards, would be the means of drawing great crowds from all parts of England, with an attendance, of a possible maximum of 250,000 people. Such at least was the sanguine expectations of those who supported the policy of centralization on one permanent location. The actual attendance, on the five days the show was open to the public was 65,103, and the total drawings were \$27,736. This year's Industrial attracted 68,544 people, and the total drawings amounted to \$33,980. The Park Royal, with a population of over 5,000,000, within a radius of ten miles, from which to draw visitors, attracted 3,500 fewer visitors than the Winnipeg Industrial with a population of less than 250,000 people within 200 miles, from whom to collect the people who paid for admission at its gates. Their biggest day's crowd was 20,569, ours numbered 27,081 people who paid for admission.

The King and several members of the Royal family were present again and again, and that of itself could be reckoned worth thousands of dollars of gate money. The weather was good. Had the show come off ten days earlier the place would have been a perfect quagmire and the only consolation now left the directors is that their probable loss on the season's show might have been \$25,000 more than it actually is.

The committee who have carried through this scheme of centralization are certainly in a pitiable position. They have carried out their pet plan of centralization at a point as near London as possible, in the face of strong opposition from many practical men, they have incurred an enormous cost for land and buildings and have at the very first opening of their undertaking prepared for themselves the biggest dish

of humble pie that could possibly be set before a body of business men.

Meantime the fact remains that in the year of grace 1903 the City of Winnipeg and a handful of its business men have been able to put up a show sufficient to attract more visitors and draw more gate money than was done within a ten minutes' ride of the greatest centre of population ever known. And the rising sun is still growing at a greater pace than ever before.

HOARD.

HOME GROWN STOCK FOODS

(Concluded)

It can clearly be proved that home grown foods can be used entirely for stock feeding at all seasons of the year, when the farm is situated some distance from the markets and stations, and that a suitable ration can be chosen according to the available food supply on the farm at any given time.

When the farm is in close proximity to a good market, it is certainly advisable to sell some crops at a good price, and purchase foods instead, thus considerably increasing the feeding and manurial value of the farm without directly purchasing manures. It is important, however, to rely chiefly on home grown foods to carry all classes of farm stock through the winter and early spring months, because the bill for purchased foods must be seriously considered in these times of small profits. The use of purchased food on grass lands is necessary to supply the annual loss of manurial condition due to the sale of milk, cheese, or meat: as without this necessary assistance the grass land would gradually but surely deteriorate. This system of supplying stock on grass, with cake is economical, and it deserves to be more extensively practised on dairy and stock farms. It is now well known that the quality of home grown stock foods depends to a large extent upon the manurial condition of the farm, so it is important

to increase the quality as well as the yield of the various farm crops to be used for feeding purposes. The large roots exhibited at shows may be valuable from a botanical point of view, and they may evoke wonder and curiosity from the beholders, but practically they are simply monstrosities and are of small feeding value. The mineral matter or ash contained in the various home grown stock foods possesses more value than is generally supposed. The health of our live stock depends to no small extent upon the amount of nitrogen phosphoric acid, potash, soda, and other substances contained in the food given them. It is necessary to supply these substances for the use of our crops when they are deficient in the soil. The diseases of plants and animals are often capable of being traced to a deficiency of some essential plant or animal food in the soil or food, so it is of the utmost importance to select manures and foods with judgement, and not only from a monetary standpoint. Tuberculosis has been attributed to a deficiency of phosphoric acid in the milk yielded by tuberculous cows, and there is every reason to believe that the absence of phosphoric acid in the soil is the primary cause of this and other diseases. The practice of boning of grass land in one of the dairying districts in England is a custom which has been followed for many generations with marked success, and it now appears that this custom is correct from a bacteriological point of view. Cows can be tested with tuberculin in order to discover the diseased animals, and these animals should be isolated, and a cure tried. Food rich in phosphoric acid, such as bran and dec. cotton cake, should be used in the ration, and calves should be fed with sterilized milk. The soil on stock farms should be supplied with manures containing this (phosphoric acid) essential plant and animal food, and a check will thus be given to this prevalent disease without destroying any affected animals.

It is advisable to crop a certain portion of the arable land with fodder crops for conversion into hay or silage, and for sil-

ing to horses, cows, and other stock during summer. Lucerne, of which I cannot speak too highly, red clover, and Italian rye-grass, would provide a valuable addition to the other home grown stock foods, and less cake and corn would be required. Dry fodder would also be economised, as these crops can be used in autumn, on pastures and elsewhere, to the benefit of the stock and the land.

W. R. GILBERT.

SOME IMPRESSIONS OF THE PROVINCE OF QUEBEC

A recent tour through part of this Province has impressed me, more and more, with its growing importance.

No doubt other parts of the Dominion may have advantages of soil and climate which Quebec does not enjoy, nevertheless the possibilities for trade commerce and successful, if not extensive agriculture, are no less apparent, and when we take into account the growing cities of Montreal and Quebec, to say nothing of the smaller, but no less prosperous ones, such as Sherbrooke, Three Rivers, etc, one cannot but feel that we are in what is destined to be a most important part of the Empire. Again, when we consider that the great water-way, the St. Lawrence, winds its magnificent course through the province with its lakes and tributary streams intersecting the surrounding country, making its ports of the utmost value for commercial enterprise, and affording a ready route for the transportation of the products of the farm, the orchard, the forest and the mine, it is evident that the natural topographical advantages are of the first-order. Trunk and branch railways, as a means of rapid and easy transportation of passengers and merchandise either in operation or projected, are doing wonders in the development of the country and its resources. The public roads in every district I have passed through are in fair condition and in many counties much improved. The executive could

not do better than grant liberal subsidies for the making and the keeping in repair of the highways, for many a parish depends, in no small degree, upon the quality of its roads. I came to one township about 20 miles from Quebec where there is no railway near, and the only way to it from the city is over a "dismal swamp" of about three miles which, at some seasons of the year, is well nigh impassable. Now, if the people would give a "long pull a strong pull and a pull altogether," and the government would give them some help, this piece of swampy road might be macadamized, and the value of the land, much of which is excellent for dairying and feeding cattle, and other parts covered with wood, would be increased in value by thousands of dollars by the judicious outlay of comparatively a few hundreds.

But to revert for one moment to railways. The Lake St. John is a notable example of what a well equipped and well managed line can accomplish. When it was first projected, it was looked upon as a "wild-goose" chase running into a district where the climate was too rigid for agriculture and the natural products were a few oumaniche pelts, and firewood; but the road, under the able management of Mr J. G. Scott, has become of great importance to the whole country, opening up places which were in a measure, inaccessible and a region in the vicinity of the great lake where agriculture is not only possible but profitable. Beside all this, the road has made it possible for the citizens of Quebec to enjoy, at a reasonable cost of time and money, the joys of the rod, the chase, and the rifle, passing, as it does, numerous lakes which abound in the finest and choicest fish, making it a sportsman's paradise and through woods full of game from the cariboo, the monarch of the woods, to the timid hare. The road has also given opportunity to many who have business in Quebec to take their families to a residence in the country during the summer months, and of this they have taken due advantage, trains at cheap fares being provided for their accommodation.

Lake St. Joseph may be cited to illustrate this. Before the railway it was quite a journey from the city and could be visited only by those who were willing to camp out; but now it is reached by rail in forty minutes and as a result, the beautifully picturesque lake has a large hotel, a large number of summer cottages and an Anglican and a Roman Catholic Church.

And not only are the dwellers in the city benefited by the change, but the people who live in the locality, because the city visitors purchase the products of the land such as vegetables, milk, butter, eggs, and poultry, and thus the market is brought to their doors for, at least, a portion of what the farm yields. This is one instance, and the same occurs in a greater or lesser degree all up the line.

And, now, as regards the inhabitants: it may be freely asserted that Quebecers in the aggregate are an orderly and moral people, the fact, that, for the want of criminals, there will be no Court of assize this term is significant and highly creditable to the community.

Of course there is a criminal class, as there is in all populations, but it is kept in check not only by an efficient police service, but by the strict watchfulness of the ministers of religion. It is a curious fact that, although the city of Quebec is full of drinking saloons, otherwise called restaurants, drunkenness is not so prevalent as in most other cities, and there are days and days when the Recorder has no case before him.

Judging from the experience of my recent trip I am led to the conclusion that the same happy state of morality and consequent contentment is the rule rather than the exception. Occupiers of land who do their duty by it can thereby obtain a comfortable living for themselves and families and especially in some cases where the land has been in the occupancy of the same line for a generation or two, and they have proved worthy of the trust.

Of course there are exceptions and a certain class who are poor, but even these, if they are industrious, manage to live and scratch out an existence from means which

would seem impossible; some by picking berries, roots and medicinal herbs from the bush, some by making baskets and brooms; thus, by these means and by the strictest economy they live a primitive but in many respects a happy life, perhaps because luxuries are unknown to them and their soupe aux pois, soupe maigre, and an occasional ragoût are as great delicacies to them as the rich dishes prepared by the most noted chef are to the pampered millionaire.

But, alas! there is yet another exception, that of the lazy, the careless, and the indifferent, and these crimes, for such they are, can usually be traced to the operation of the arch-fiend, intemperance. A man who has a living to get cannot succeed if he robs his family to gratify an inordinate appetite for whiskey. The dwellings of such are squalid and filthy, the wives, being discouraged, fall into the same state of lazy indifference, and the poor children suffer, for food, clothing, and training. In most cases these people are the grumblers; laws, weather, and even the decrees of Providence do not suit them; the country is good for nothing, and not worth living in; it is true they are an oppressed race but they are their own oppressors.

To sum up; Canada is for Canadians, and the Province of Quebec, a portion of the great Dominion full of possibilities for those determined to get an honest living by the sweat of their brows, and the intelligence with which they are blest, while our educational and ecclesiastical institutions give them a chance to enable their families to progress in all useful knowledge and to fill important positions of trust in the body politic as the days advance. For men of small means, I believe that, if some of the numerous immigrants who pass us to take up their abodes in the far west would remain with us, take up land and practise intensive rather than extensive farming, not justified by their capital, they would eventually find it to their advantage.

(Signed) GEO. MOORE.

TRUTH PERENNIAL

The late Horace Greeley was one of America's great philosophers, and well understood any subject upon which he treated.

Fifty years ago he delivered an address on agriculture and the truths and good advice it contained are as applicable at the present day as at that time. A director of an agricultural college or experimental farm could do no better. The remarks with regard to fruit culture seem to have been prophetic. We make no apology for reprinting the address for the benefit of our readers, but advise them to read it carefully and shape their practice according to its valuable suggestions.

His subject was, "What a Poor Farmer Cannot Afford To Do," he meaning a farmer of limited means not one who did not do his work well. It contains so many good thoughts, such good advice to the farmers of to-day, that we reproduce part of it for their benefit, and we know it will be read with pleasure and profit by them. In that address Mr. Greeley said:

"The truth I am most anxious to impress is, that no poor man can afford to be a poor farmer. When I have recommended agricultural improvements, I have been told, 'this expensive farming will do well enough for rich people; but we who are in moderate circumstances can't afford it.' Now, it is not ornamental farming that I recommend, but profitable farming. It is true that the amount of a man's capital must fix the limit of his business, in agriculture as in everything else. But however poor you may be you can afford to cultivate land well if you can afford to cultivate it at all. It may be out of your power to keep a large farm under a high state of cultivation, but you can sell a part of it and cultivate a small one. If you are a poor man, you cannot afford to raise small crops; you cannot afford to accept half a crop from land capable of yielding a whole one. If you are a poor man you cannot afford to fence two acres to secure the crop that ought to grow in one; you cannot afford to pay or lose the

interest on the cost of a hundred acres of land to get the crops that will grow on fifty.

"No man can afford to raise twenty bushels of corn to an acre, not even if the land was given to him, for twenty bushels will not pay the cost of the miserable cultivation that produces it.

"No man can afford to cultivate his land in such a manner as will cause it to deteriorate in value. Good farming improves the value of land, and the farmer who manages his farm so as to get the largest crop it is capable of yielding increases its value every year.

"No farmer can afford to produce weeds. They grow, to be sure, without cultivation: they spring up spontaneously on all land, and especially on rich land, but though they cost no toil, the farmer cannot afford to raise them. The same elements that feed them would with proper cultivation nourish a crop, and no farmer can afford to expend on weeds the natural wealth which was bestowed by Providence to fill his granaries. I am accustomed, my friends, to estimate the Christianity of a locality through which I pass by the absence of weeds on and about the farms. When I see a farm covered with a gigantic growth of weeds I take it for granted that the owner is a heathen, a heretic or an infidel—a Christian he cannot be, or he would not allow the heritage which God gave him to dress and keep to be deformed and profaned. And if you will allow me to make an application of the doctrine I preach, I must be permitted to say that there is a great field of missionary effort on the farms. Nature has been bountiful to you, but there is great need of a better cultivation.

"Farmers cannot afford to grow a crop on a soil that does not contain the natural elements that enter into its composition. When you burn a vegetable a large part of its bulk passes away during the process of combustion into air. But there is always a residue of mineral matter, consisting of lime, potash and other ingredients that entered into its composition. Now, the plant drew these materials out of the

earth, and if you attempt to grow that plant in soil that is deficient in these ingredients, you are driving an unsuccessful business. Nature does not make vegetables out of nothing, and you cannot expect to take crop after crop off from a which to maintain the fertility of your farms, you must constantly restore to field that does not contain the elements of them the materials which are withdrawn in cropping. No farmer can afford to sell his ashes. You annually export from Western New-York a large amount of potash. Depend upon it there is nobody in the world to whom this is worth so much as yourselves. You cannot afford to sell it, but a farmer can well afford to buy ashes at a higher price than is paid by anybody that does not wish to use them as fertilizers of the soil. Situated as the farmers of this country are in the neighborhood of a city that burns large quantities of wood for fuel, you should make it a part of your system of farming to secure all the ashes it produces. When your teams go to town with loads of wood, it would cost comparatively little to bring back loads of ashes and other fertilizers that would improve the productiveness of your farms.

"No poor farmer can afford to keep fruit trees that do not bear good fruit. Good fruit is always valuable, and should be raised by the farmer, not only for market, but for large consumption in his own family. As more enlightened views of this diet prevail, fruit is destined to supplant the expensive quantities of animal food that are consumed in this country. This change will produce better health, greater vigor of body, activity of mind and elasticity of spirits, and I cannot doubt that the time will come when farmers instead of putting down the large quantities of meat they do at present, will give their attention in autumn to the preservation of large quantities of fruit for consumption as a regular article of diet the early part of the following summer. Fruit will not then appear on the table as it does now, only as dessert after dinner but will come with every meal, and be reckoned a substantial aliment.

"No poor farmer can afford to work with poor implements that either do not do the work well, or that require an unnecessary expenditure of power. To illustrate this, it will be necessary to ask your attention to the mechanical operation requisite for the production of good crops. It is essential to the thrifty growth of a plant that the air should have free access to every part of it, that roots as well as the leaves, and that the soil in which it grows should be moist, but not too moist, and should have a certain degree of warmth. These necessities of vegetation will enable us to understand the mechanical operations on the soil demanded by good farming.

"The soil should be light and finely pulverized, in order that the little fibres sent out by the roots in search of nourishment may easily permeate in all directions. It should be porous to be easily penetrated by air and water, and as its own weight and the filtering of rains tends constantly to bed it down into a compact mass, it needs frequent stirring."

"The bases of successful Agriculture and Horticulture" are good soil, good climate, good preparation of the land with the plow, the harrow, and the roller; the spade, the hoe and the rake; good seed, proper rotation of crops, suitable manures, surface culture of growing roots for the aeration of the soil and the destruction of weeds; spraying with poisons, to prevent blights, and destroy insects, promptness in sowing and harvesting the crop, and trust in Providence.

STRAY IDEAS

One who loves the beauties of nature expresses, in a degree, his love for their Creator.

The cultivator is a true philanthropist if he does his best to increase and improve the productions of the earth.

The theory of farming and gardening are identical, the one intensive, and the other extensive.

BOYS

The cultivator who has a son he wants to bring up to succeed him should make a confidante of him, not scoff at, or oppose any suggestions he may offer, but discuss them with him, and if he is in error point out to him in what particular points: or if he, the boy, is right, admit that he is so: thus he will be led to take an interest in his occupation, and love it as he must if he is to be successful.

It is often the father's fault if the son leaves his home for more congenial surroundings.

FALL PLOWING: WHY AND HOW.

The harvest being over, the problem of plowing as a preparation for next year's seeding present itself, and the questions, "Why plow in the fall, and how should we plow?" call for consideration. The advantages to the following crop, of fall plowing in the case of heavy clay soil, are obvious, the beneficial effect of the winter's frost in mellowing the land and rendering it easy to work in the preparation of the seed-bed in springtime being indisputable. Moisture is also more readily retained in fall-plowed land should the weather in spring be dry. In the case of light or sandy soils the advantages in these respects may not be so apparent, but we are of the opinion that even in these moisture will be found to be better conserved in lands plowed in the fall than in the case of spring plowing. Many advanced farmers advocate and practice plowing twice in the fall, once immediately after harvest, a shallow plowing, for the purpose mainly of germinating weed seeds to be destroyed by the later plowing, and of preventing growing weeds from maturing. This is doubtless a good practice, especially where such conditions exist, as also in the case of clover sod plowed early and cultivated on the surface to hasten decomposition of the sod, with a view to plowing it later as a preparation for certain crops the following spring. But

where land is tolerably clear of noxious weeds, as is generally the case where good farming is practiced, two plowings in the fall are not considered necessary, and it is doubtful whether the advantages from such course are sufficient to pay for the outlay of labor required. The necessity for early fall plowing is greatly lessened where a flock of sheep is kept, as they are excellent scavengers, eating many varieties of weeds and thriving upon them.

As to how plowing should be done, it depends much upon the composition of the soil. Light land may, with fair results, be turned over flat in comparatively wide furrows, as in summer plowing, but clay land needs to be turned in narrower furrows, well set up, leaving more surface exposed to the influence of frost, and preventing the running together and packing of the soil by heavy rains, leaving it sodden and difficult to work in spring. Deep plowing is no longer considered advantageous, as a rule, about six inches being the approved depth. It for any reason it is though desirable to go deeper, it is not wise to increase the depth by more than an inch at any one plowing. We have known fields to be damaged for years by turning up an undue depth of cold clay, having a tendency to bake and to impoverish rather than improve the character of the land. The question of ridging the land depends largely upon the quality of the soil. In light or loamy land having good natural drainage, it is not generally considered necessary, while on heavy clay soil, unless it is thoroughly underdrained, it is usually necessary to ridge in order to set the land up for throwing off the excess of water, and to prevent the heaving of clover or winter wheat from alternate freezing and thawing. In the case of land cultivated in the fall, with a view to using it for roots or corn the following spring, it is good practice to throw it up in narrow ridges of two furrows together, which facilitates early spring cultivation, keeping the land dry and mellow and in the best condition for working to a fine tilth. In any case, surface water furrows having a good free outlet should be run through

all low or slack places in the fields for the purpose of carrying off surplus water and rendering the land fit for cultivation early in the spring, since experience has plainly taught that, as a rule, the early sown grain crops thrive and yield decidedly the best.—FARMER'S ADVOCATE.

Household Matters.

(CONDUCTED BY MRS. JENNER-FUST)

The small boys have much cause to rejoice at the rare harvest of apples they have got this year for the trouble of gathering, which supply has come from crabs, unfenced and abandoned old orchards, and the supply has been almost unlimited, in some parts.

It does one's heart good to see the merry little people go by crunching away, at the same time showing a good supply in the bulging blouse, used freely for the occasion. We all know what a great help towards health fruit is, but it is not every year that such an abundant crop comes, so that all can be satisfied. Plenty of fruit and vegetables as a source of help towards the good health of everybody, and if this matter was studied a little more in the bringing up of a family, the Doctor would seldom be called in.

Substitute fruit for cakes and many other rich things children are freely given. Many people, who spend money freely in buying all sorts of rich confections, would think twice before spending the same sum on good wholesome fruit, yet the former only serves as a bait to help the lagging appetite, while the latter will guide the whole system into its healthy state. Fruit can be eaten without cooking, as also can many vegetables, which is sometimes a source of thought to some people, as cooking makes work, and where time is limited, even this has to be thought of in some cases.

OCCUPATION FOR CLEVER FINGERS.

This year, again, when hand-made embroidery is a perfect craze, may the girl who possesses good taste and clever fingers for dainty stitcheries, make herself many pretty articles of wearing apparel, which would cost much money to buy. Take, for instance, a wide sailor collar of white satin. This looks lovely, indeed, embroidered with tiny bunches of forget-me-nots or violets, with their pretty leaves. Such a collar, used with a simple, tailor-made costume, will give it a "cachet" of its own, which must be seen to be appreciated. Then just a simple silk tie can be made beautiful with tiny flowers embroidered over it; and, let me add, that it is this dainty embroidery only which distinguishes it from the thousands of silk ties which are seen on every hand. Sashes, belts, and all the little accessories of dress which are demanded by Dame Fashion at the present time, may each and all be decorated in this manner. If a girl wishes to have a distinctive blouse—something different from the general run of blouses—let me advise her to get a piece of Oriental satin, and to work all over it pretty sprays of flowers. This, of course, will take time, but eventually she will possess a blouse which will be the envy and admiration of her friends.

Many women are anxious to learn how to assist the dressmaker, if no more. For this a knowledge of sewing, neatness, practice in the work, natural taste and some idea of becoming colors and materials are necessary, and all are to be gained by experience. Learn to operate the machine, and do well what is done. The fitting is a trade and another branch which an amateur can seldom understand, but the rest of the work is necessary and adds to the fitting. I do not advise women to become slaves to the needle, but a knowledge of sewing aids the woman with a small purse and gives many a girl a neat wardrobe which otherwise would prove impossible for her to obtain.

BELTS AND BUCKLES.

Belts are still shaped so that they rise at the back and descend in the front, giving the graceful "dip" effect, without which no dress is fashionable. Gold and silver belts are fast disappearing, owing no doubt to their becoming so common, and being cheaply imitated. The most favourite belt is that of folded black satin or velvet, and the choice is wise, for these materials make the waist look small and the figure round, while light-coloured or tinselly arrangements only accentuate any irregularities of the form. Buckles are very much more worn nowadays, those on the belts being most ornate; and all of them are decidedly long in shape. In some instance no less than four buckles appear on one belt—one at each side, one at the back, and the usual one in front. One very quaint buckle was diamond-shaped, and made of oxidised silver, with a raised, design of flowers on it, and it looked charming worn on a folded belt of satin.

High heels were the downfall of the wife of the Austrian ambassador. Tuesday. She slipped on a polished floor at the Embassy in Washington, broke her ankle, and just at present is wearing a plaster cast in place of a high-heeled shoe.

Bead chains are so popular these days that a bright suggestion for keeping them will be welcomed by many. String them on the finest fiddle strings, instead of silk thread, and they will stand an unusual amount of wear and tear before breaking.

A CLERGYMAN ON MODERN FASHIONS

The Rev. E. J. Houghton, formerly vicar of St. Luke's, Gloucester, and Brookthorpe, took the opportunity at his harvest festival sermon in St. Stephen's, Bristol, on Sunday evening, to indict modern

fashions. "There are people," he said, "who tell us that dress was never so cheap as it is now, but ask any Society leader and she will tell you that it was never so expensive to clothe oneself fashionably as it is at the present time. And where did the fashions emanate from? From Paris, from Berlin, from New-York, from Vienna! Is it not a blot on our vaunted insularity that such is the case? What I wish is that some leader of English fashion would introduce a style of dress that should be typically English." He condemned the cruel practice of trimming hats with birds, and complained that as soon as a fashion which added to woman's grace, and which they, therefore, welcomed, was introduced, women were not contented, but proceeded at once to enlarge upon it, until it reached absolute eccentricity. "I can give you an instance," he said, "for as I walk through the streets, although I am a parson, I can't help noticing these things, and it has lately struck me more than once that the ladies of to-day could, with reason, utilise some of the unnecessary material that goes here," pointing to the sleeves of his surplice, "to lengthen the little waistcoats they seem to have outgrown."

CHEESE STRAWS.

Rub lightly 2 ozs. of butter into 2 ozs. of sifted flour, add 2 ozs. of grated cheese, a little salt and a pinch of cayenne. Mix to a rather stiff paste with some well-beaten egg. Roll out the paste very thin, cut it into narrow strips about four inches long. Place them on greased baking tins and bake in a moderate oven until slightly coloured. Remove them from the tins carefully, and serve either hot or cold as desired.

Apple sauce is often the poorest of relishes, because poorly made. This dish, like every other, is far better for pains taken in making it. Apples, merely stewed and sweetened, are not very good. Simmer the apples, which should be tart,

lively for a few moments, stirring often, till all are well cooked through, till they look as if strained, though the process is entirely unnecessary. Now, stir in a generous piece of butter and sugar to taste, salt it somewhat and flavor with nutmeg. It will be a matter of surprise to find how delicious even apple sauce can be made.

SIX FOOT LOAVES.

The largest loaves of bread baked in the world are those of France and Italy. The "pipe" bread of Italy is baked in loaves two feet or three feet long, while in France the loaves are made in the shape of very long rolls, four feet or five feet in length, and in many cases six feet.

Ring.—A ring is a circular link, put through the noses of swine to keep them in subjection, and often upon of a lovely woman with the same view.

The Swiss Alpine Society has been trying for some time to persuade all guides to insure their lives, but with only partial success. It now appeals to all tourists to engage only such guides as are insured, in order to prevent the wretchedness caused by the death of uninsured guides who have a family to support.

The Garden and Orchard.

HANDLING THE APPLE CROP.

Ottawa, Sept. 10th, 1903.

Some timely and valuable advice on the selling, picking and grading of apples is given by Mr W. A. MacKinnon, Chief of the Fruit Division, Ottawa. Every one interested in the growing and marketing of apples should write for a copy of Mr. MacKinnon's bulletin on the "Export Apple Trade."

"Selling the Crop".—When the grower is not also exporter he may sell the apples in one of two ways, either at so much per barrel or at a lump sum for the entire orchard. As buyers often make their contracts long before picking time, either method involves consideration of the probable market price during fall and winter, which will be regulated by the total supply and demand, influenced too by changes in the quality of the crop. When to this uncertainty we add the difficulty of estimating months in advance the total yield of an orchard, subject to all changes of weather to frought, hail, and wind storms, the unbusiness-like character of bargaining "by the lump" is apparent. Whichever party gains an undue advantage, the trade suffers from this as from any other kind of gambling. The system was strongly condemned by the National Apple Shippers' Association and our Canadian buyers describe it as an unmixed evil. Surely no more need be said to induce both buyers and sellers to abandon such guesswork, and to buy and sell by fixed standards of measure.

"Picking".—All apples should be carefully picked by hand, with the stems on and without breaking the skin or bruising the fruit in any way.

As a general rule it is advisable for growers to harvest and pack their own fruit, whether they eventually sell it on the premises or ship to foreign markets. In either case it is a great advantage to the seller to know exactly the quality and variety of the fruit in every package. It is a still greater advantage to have each variety picked at just the proper time. No wholesale buyer is able to have his men arrive at each orchard just when the apples in it are ready. The result is that every season a great many orchards throughout Canada are picked either too early or too late. Fruit picked too early may keep but is apt to become tough and tasteless; if picked too late it will not keep, as the process of decay has already begun.

"Time to Pick".—Tender varieties should not be allowed to ripen on the trees

or they will not carry well. Certain others, sometimes styled "winter varieties," such as the Baldwin and Spy, will gain in color and flavour if left on the trees as long as the frost will allow, besides being less liable to spot and mould during storage. It will pay the farmer well to pick his own fruit and see that this first step in marketing entails no needless waste.

Moreover, all varieties of apples are no ready for picking at the same time, even those destined for the same market; and some early varieties should have more than one picking to get all the fruit at the proper stage of maturity. Only the grower is in a position to watch his orchard and harvest the crop to the best advantage, and it is the grower who loses when he entrusts this task to another, for buyers are certain to allow for shrinkage from this cause. Another loss to the grower arises from carelessness of hired help, who often injure trees by breaking limbs and fruit sour.

"Removal of Drops".—Before any fruit is taken from the trees, every apple, good, bad and indifferent should be cleared off the ground and carried away, to be used for feeding, stock or for any other purpose for which they may be fit, but not for export. Similarly, apples which drop during the picking process should be kept by themselves. We must give the fruit a fair chance from the start; wormy, rotten or otherwise diseased apples spread contagion, and bruised or defective fruit will not pay for labour, heavy freight charges and commission.

"Ladders and Baskets".—Step-ladders may be used for getting at the lower limbs, and long point-top ladders for the upper branches; the baskets should be small enough to turn easily inside a barrel, and so shaped as to allow the apples to be turned out with a gentle, sliding motion. In picking, care should be taken to avoid breaking off the fruit spurs, which contain the promise of next year's crop.

"Grading".—Grading always pays, whether the crop be light or heavy. When the wormy, bruised, misshapen and spotted

ed apples have been removed, the following qualities should be apparent in the higher grades :—(1). Uniformity size. (2). Uniformity in colour. (3). Freedom from defects.

Two grades will usually be found sufficient for export, and both of these should be practically free from insect or other injuries, the second being inferior to the first only in point of size and colour. All the apples in one grade cannot be uniform in size, but the apples in a single package should be so, for the fruit will be viewed and sold by the package.

It may well happen that a third grade, exclusive of culls, will be found to consist of fair marketable fruit, which the grower feels disposed to export; but this grade, lacking any special features of excellence and showing a greater percentage of waste often eats into the profit earned by the finer fruit, besides reducing the general reputation of the shipper's brand. Much better average results are likely to be obtained in local markets of from evaporators.

The merits of mechanical graders placed on the market from time to time, should be carefully investigated by all whose shipments are large. A really good and rapid grader will effect a great saving in time and money, and produce a wonderful difference in the appearance of the fruit when each size is placed in packages by itself.

The expert women who grade French fruit for market perform the operation without mechanical aid. A few days' practice with measuring rings is sufficient to train the eye so that fruit is accurately graded within a quarter of an inch. Many who are attempting to grade by hand will find that the use of a piece of shingle or other light wood in which holes are cut measuring two and a quarter, two and three-quarters, three and three and a half inches respectively will be of great assistance in this work. By testing an apple now and then the packer will soon become expert in determining the size without the use of the testing board.

Yours very truly,
W. A. CLEMONS,
Publication Clerk.

ENFORCING THE FRUIT MARKS ACT.

The Inspectors of the Dominion Fruit Division are now devoting special attention to the enforcement of the Fruit Marks Act. Several prosecutions have taken place in Ontario, all of which resulted in convictions, and several are now pending in Nova Scotia. These are mainly for marking inferior fruit No 1, although there is such a large amount of first class fruit in the country packers still persist in trying to palm off inferior fruit as No 1.

Mr. W. A. MacKinnon, Chief of the Fruit Division, says that retailers are beginning to understand the scope of the act much better than formerly, and appears well aware of the existence of the law and of the fact that it is being enforced by inspectors. They also understand the fact that it is at the disposal of any private citizen. A prosecution is now pending in Toronto by a private citizen against a retailer who is said to have disclaimed responsibility. Only a single basket is involved but it is clear that if individuals do not protect themselves in the case of single baskets, they are not likely to do so at all, as ninety per cent of their purchases are of single baskets. It will be the policy of the department to hold the retailers more strictly to account in the future for the packages of fruit which they pass on to the public. If the retailers do not themselves complain when they find dishonest packing it is because they are willing to share in the fraudulent profit. Of course the original packer will always be prosecuted when he can be discovered, but that will not excuse the retailer.

W. A. CLEMONS,
Publication Clerk.

The Dairy.

THE BUTTER EXHIBIT

The quality of the butter exhibited was excellent and the entries were numerous. President Wm. Hutchison has received the following letter from Mr. J. A. Ruddick, chief of the dairy division :

"Dear Mr. Hutchison:—As judge of butter at the Exhibition I have pleasure in testifying to the high standard of quality found in the exhibits this year. One thing is particularly noticeable, and that is the marked improvement in the style and finish of the butter as compared with a few years ago. The finish and general appearance of the export creamery butter in the present competition leaves very little to be desired, except that in some cases the boxes are not as strong nor as neatly made as they might be, and some of the parchment paper used is too light in weight.

"If I am permitted to make a suggestion as one interested in this, the most important branch of agriculture in Canada, I would say that I think the dairy department of your exhibition might be made a much more attractive feature if a special

building could be erected for it, with facilities for conducting competitions and demonstrations in butter-making. Such a building should have a cement floor, which would help to keep it cool in hot weather, and there should also be an amphitheater large enough to seat at least 500 people with the necessary space for butter-making in the center. Such work would be both instructive and entertaining, and the seats would provide a comfortable resting place for weary sight-seers.

"A properly constructed dairy building would be a valuable object lesson to the cheese and butter manufacturers of this part of Canada, and there is not the slightest doubt but that it would prove to be a very attractive addition to the many excellent features of your splendid exhibition. I am, yours faithfully, J. A. RUDDICK, chief of dairy division."

PROVINCIAL COMPETITION OF DAIRY-PRODUCTS, HELD AT QUEBEC, AUGUST 25th, 1903.

CHEESE

DIPLOMA OF THE FIRST CLASS.—SILVER MEDAL.

No.	Competitors	Address	County	Points	Prize money
					\$ cts.
75	J. T. Lavoie.....	St-Gédéon.....	Lac St-Jean.....	98	11.00
39	James Hamilton.....	Robinson.....	Compton.....	98	11.00

DIPLOMA OF THE SECOND CLASS.—BRONZE MEDAL.

12	Albert Gendreau.....	St-François.....	Beauce.....	96½	8.00
43	Félix Noël.....	Fir Grove.....	Dorchester.....	95½	6.00
104	Adjutor Lepage.....	Garthby.....	Wolfe.....	95½	6.00
57	Thomas Leclerc.....	St-Denis.....	Kamouraska.....	95½	6.00
125	Frs. Bhéret.....	MalBaie.....	Charlevoix.....	95	5.00
48	Joseph O'Leary.....	St-Alexandre.....	Kamouraska.....	93	1.00

Judges: MM. E. Bourbeau, J. H. Scott et J. A. Vaillancourt

BUTTER.

DIPLOMA OF THE SECOND CLASS.—BRONZE MEDAL.

64	Arthur Beaudet.....	St-Agapit.....	Lotbinière.....	96½	8.00
111	Aug. Breton.....	Cacouna.....	Temiscouata.....	96	7.00
18	Achille Lacasse.....	St-Lazare.....	Bellechasse.....	96	7.00
67	Arthur Bergeron.....	Beaurivage.....	Lotbinière.....	95½	5.00
65	Philibert Pomerleau.....	Ste-Agathe.....	Lotbinière.....	95½	5.00
19	Napoléon Brochu.....	St-Raphaël.....	Bellechasse.....	95	5.00
94	F. X. Faber.....	St-Raymond.....	Portneuf.....	94½	4.00
42	H. Weston Parry.....	Compton.....	Compton.....	94½	3.00

There were 40 competitors.—

Judges: MM. H. G. Nivin, E. A. Brice et J. D. Leclair.

O. E. DALAIRE,
Secretary of the competitions

CHEESE AS AN ARTICLE OF DIET.

Ed. Hoard's Dairyman :—Your article, page 707, reached my table not very long after a report from a young domestic science student. In this report were several bills of fare containing "Fondu" as one article and that, the principal source of albuminoids for the meal. Naturally the cheese article arrested attention. It would seem from the statement that "one may buy cheese sandwiches in Great Britain as readily as those made with meat," as though cheese sandwiches could not be purchased readily in America. If your readers wish to test this, let them make a fair trial in any city, or country town of any size, and they will probably find that cheese sandwiches can be found or made almost any where. Crackers and cheese lunches were common and popular with our grand parents

The cheese supply is apt to be nearly exhausted in spring, and new cheese is put on the market at a lower price than old cheese commands, in order to realize quickly on it. New cheese, or at least only partially cured cheese, is too frequently put on the market here in America, and the sale is injured from the fact that in this form it is less digestible than after it is properly cured. If only well cured, and therefore easily digestible cheese were exposed for sale it is probable the consumption of cheese would greatly increase.

When cheese finds its way into our tables in a state to "melt in the mouth" with proper mastication, it is easily digestible and cheaper than meat in most localities. This is well understood by a great many Americans who have not studied the subject in Europe, and at most all our cheese-makers know the facts. The error is made in a business way in order to realize early on the product, and we believe the cheese-maker is not the man who is responsible for the too early removal of the cheese from the curing room. We have never met a cheese-maker who would not rather keep the cheese on the shelves until fairly cured, when he knows it will be much better received than when sent out earlier.

In America we know some things that Europeans do not seem to have ever had opportunities to pick up. They are only beginning to learn of the value of American apples and as yet know nothing of the virtues of apple dumplings and apple or mince pies. Over here, however, these articles have been every day affairs and, uncounsciously, perhaps, with regard to the scientific balancing of the ration, cheese began to be taken along with the pie.

With the light that is now being shed on diet from the scientific centers it would seem that this is a step in the right direction, toward the balanced ration, even it taken in small quantities. Perchance the eater has at the meal taken meat or eggs enough to supply his quota of nitrogenous food when a larger portion would be wasted or worse. As yet too few people consider these points.

However, the point made, and which we would reinforce is that more cheese could be used with less meat and less expense would be incurred since cheese is so rich in albuminoids. The writer once planned to make a bulletin on this subject and as a beginning proposed to use cheese in his own family and to write from practical experience as well as from other points of consideration.

Skim milk cheese was sought for cooked articles because richer in protein and cheaper but it could not be found readily. Imperfectly cured cheese was cooked. The object aimed, at was to show that these articles could be used readily and safely, and that the expense of a really nutritious diet would be much less than with meat.

The great obstacles to be overcome are that our people are addicted to a meat diet and they are not accustomed to cheese. Therefore they like the one and do "not" like the other. This taste for one and distaste for the other at home stopped the bulletin. But the work went far enough to bring an acquaintance with cheese as a staple article of diet which has grown and the report of the bill-of-fare named at the opening of this article came from one of those who objected to cooked cheese at

that time. Now it is, perhaps, a commonly selected article as a principal dish for a meal now and then, and is relished by all.

FRANK E. EMERY.

Chicago, Ill.

THE VALUE OF MILK USED IN THE MANUFACTURE OF CHEESE.

In a copy of the report of the Agricultural Sub-committee for Gloucestershire, which Mr. H. A. Howman has sent me I find the details of a good deal of work which has been performed in the manufacture of nine varieties of cheese. These details are of considerable interest, not because the figures which are included are by any means an exact guide to what is possible, or what is not possible elsewhere, but because it would appear that the system involved is calculated to be great service to those who produce milk in other parts of the country; and for this reason it would be still better if those who make cheese in other institutions were to adopt a similar method of propagating facts of the same kind, and of doing so even more extensively, for the reports of dairy schools do not reach very distant districts. It appears that particular weights of all these varieties of cheese were produced from given quantities of milk, that the cheese averaged a particular price per pound in each case, so that it has been possible for Mr. Howman to calculate the actual sum realised per gallon for the milk used. A dairy farmer, looking down the list of returns, would probably decide in the majority of cases that his wisest plan would be to sell milk, and to have nothing to do with cheese making. But much depends upon the conditions, as we shall see. In the first place, the milk employed was apparently poor in quality, for it required a good deal more than a gallon to produce a pound of cheese. Stilton cheese, for example, realised 12.8d. per lb., but the price per gallon realised was only 10.7d. Cheddar for the milk was only 6d., and similar

realised 7.3d. per lb., but the price realised differences are found in the case of Wensleydale, although both the single and the double Gloucesters and the Caerphilly realised practically as much per gallon of milk as was obtained per lb. of cheese. On the average of the season, really good milk should produce a pound of Cheddar to the gallon, and by the expression "good," I mean milk containing about 6 per cent. of fat. Referring to one of the most important series of experimental productions on a large scale, with which I am acquainted, I find that where the milk contains from 3 to 3.5 per cent. of fat, the cheese made per 100 lbs. of milk was 9.14 lbs. With every 0.5 additional percentage of fat in the milk, there was an increase in the quantity of cheese made, and a decrease in the quantity of the fat lost in the whey, until we reach the maximum fat percentage, 5 to 5.25 per cent. Here the loss of fat in the whey was less than two-thirds of that lost in the case of the poor milk referred to, while the quantity of cheese made per 100 lbs. of milk was increased to 13.6 lbs. Evidently, therefore, the milk employed at Gloucester could not have been very rich. And here lies the first point. If the farmer produces milk for sale, his object is to escape falling below the standard. More than the standard he is not obliged to provide, unless in accordance with any arrangement with his buyer; but the object of the cheese-maker, like that of the butter-maker, should be to produce milk of very rich quality, the richer the better, for, as we have seen, he may approximately produce 40 to 50 per cent. more cheese, and this he can do not merely by good feeding, but chiefly by the introduction of blood into his herd. Now that the dairy farmers' associations are becoming strong, and feeling their feet, and also able to dictate the price of milk in summer as well as in winter, they are not likely to be content with 5 to 6 per cent. per gallon as the result of cheese making, although this is slightly increased by the addition of the value of the whey. The Gloucester prices would have been materially increased if the milk had contained 1 per

cent. more fat. In all probability the Stilton cheese would have realised as much per gallon of milk as per lb., while the Gloucester, the Caerphilly, and the other varieties, including the soft cheeses, would have realised prices which would have been more advantageous than those which are realised by the milk-seller pure and simple. A large quantity of Pont L'Eveque cheeses were made, and these realised 6d. each, which meant 9 1-4d. per gallon for the milk, but while the more popular Camembert and Coulommiers realised only 4d. each, or 6.8d. a gallon of milk, the Port du Salut, sold in a smaller quantity, realised 8.3d. per lb. In my experience the two soft cheeses named—for Port du Salut is not precisely what the French call "pate molle"—should realise nearly 1s. a gallon for milk, but in the ordinary way neither variety is usually well ripened in this country, and sales have to be effected to private individuals, who are not usually willing to pay full price any more than the dealers, who are so exacting that they prefer French makes to anything else.

JAMES LONG.

The Poultry-Yard.

DOCTORING FOWLS

When disease breaks out in the poultry run the first thing the novice usually does is to write a letter to a poultry paper detailing the symptoms, and asking how to effect a cure. This, so far as it goes, is all right, but very often before a reply can reach the querist his birds have reached a stage where treatment is of small avail. If he had possessed even a rudimentary knowledge of "first aid" it might have made in all the difference. Immediately a bird is observed to be out of sorts it should be isolated. This is essential because most of the diseases to which fowls are subject are contagious and soon spread to the entire flock. There are certain virulent diseases, such as diphtheretic roup and

cholera, for which there is only one cure, viz, strangulation; but wherever doubt exists an special to an expert should be made, and, if possible, a post-mortem examination of the dead bird obtained. Upon the result of this any future action as regards prevention can be based, and a recurrence of the trouble avoided. Where the diagnosis points to a contagious disease the carcase of any fowls that succumb should be burnt and buried in quicklime; in fact, it is wise to do this in any case. The common ailments will generally yield to prompt treatment, and many firms supply remedies which can always be kept at hand ready for any emergency that may arise.

HOW TO GIVE A FOWL MEDICINE

It is not such a difficult matter to administer medicine to a fowl as is generally supposed. The best time to give it is at night, when the bird is drowsy, as it is less likely to flutter or become excited. Hold the body firmly well up under the left arm, which leaves both hands free. With the left hand open its beak by pressing the month at the sides. Take the spoon in the right hand, and place in the beak, keeping the tongue well under it. Then tilt slowly upwards, when the medicine will usually be swallowed. Never administer more than half a teaspoonful at once. Also see that the nostrils of the fowl are clean, so that it can breathe, or it will suffocate. There are certain rules in reference to measures which, as affording a guide to a correct dose, it may be as well to note. A teaspoon holds about one fluid drachm, a tablespoon half a fluid ounce, and a gine-glass two fluid ounces. A drop is larger with some liquids than with others. For instance, about sixty drops of minims of water go to a teaspoonful or drachm, while of landanum or other tinctures and alcohol 120 drops go to a fluid drachm. Generally speaking, a dose that would be considered right for a child is about right for a fowl. If fowls were kept under proper conditions there would be little need for administering medicine at all, and if it

were more generally realised that the greatest preventives of disease among fowls are cleanliness and sunlight the poultry doctor would find his office a sinecure.

INCUBATORS AND LAYING QUALITIES

A short time since I was the recipient of a question which has probably occurred to others. The querist had been informed that pullets hatched in an incubator were likely to be inferior as layers to birds hatched under a hen, and wished to know if it was correct. It is curious what strange ideas prevail in regard to incubators, which, after all, merely perform the office of hatching. Experience certainly does not support such an idea, neither does reason. The mission of the incubator ceases directly the chicken is hatched.

CHANTICLEER.

PIGEONS.

It will pay to go into the pigeon business for squabs only, provided one gets the right kind of stock and gives careful attention and proper management. Most of the main requirements, at least, are included at the start in the following summary of Farmers' Bulletin, No. 177.

The best breed to use for squab raising is straight-Homers or a cross between them and Dragoons. Successful breeders use Homers almost exclusively, because they are the best workers and feeders, and raise larger squabs in four weeks time than any other variety. By a cross of straight Homers with Dragoons you get a larger squab in four weeks time than with straight Dragoons. A pair of straight Dragoons requires five weeks to bring squabs to market size, but the cross will result in a larger squab which can be put on the market in a little over four weeks.

One large pigeon house is better and more economical than several small ones, but in no case should a house be built to accommodate more than 250 pairs. If larger numbers are to be kept, more than one

house should be built. A room 8 x 10 feet will accommodate fifty pairs very comfortably. The fly should be extended thirty-two feet if possible.

Pigeons should be fed twice a day—in the summer time at 6.30 A. M., and 4.30 P. M., in the winter 7.30 A. M., and 3 P. M.

The best kinds of feeds to use are cracked corn, red wheat, Kafir corn, millet, peas, hemp and rice. In the morning give wheat, cracked corn and peas equal parts; in the afternoon give equal parts of cracked corn, peas, Kafir corn and millet. The birds should be fed in the pen rather than in the fly.

Water the birds every morning before feeding, using nothing except fresh, pure water. Always clean out the fountain before filling.

Bathing is very essential to the health of pigeons. In summer they should have an opportunity to bathe at least every other day. In winter the bath should be given only on bright, sunny days. It is essential to clean house once every week. After cleaning the nets, put powdered carbolated lime in all cracks, corners and damp places. Sprinkle the floor with lime and sprinkle a bucket of sand evenly over the lime.

The author's 425 pairs of pigeons produced in one year 4400 squabs for market. Any one with good stock and giving as good care and feed ought to do as well.

A FRENCHMAN'S EGG PRESERVING INVENTION.

M. Louis Parisot, an eminent French chemist, has discovered a liquid which, he says, will keep eggs quite fresh for a period of twelve years. If he can do it for one year he has fortune enough, but many others have thought they had the trick and failed. Early last year, it is said, he placed a large number of new laid eggs in this liquid, and he took the precaution to get a magistrate to witness the proceeding and to affix to the tank his official seal. At the expiration of twelve months the

magistrate witnessed the opening of the tank, and the eggs were found in excellent condition. Four, which were selected haphazard from the tank, were at once boiled for eating, and were found to be in first rate condition and of excellent flavor. Later on the inventor had another triumph, some eggs which had been in the liquid for four months were successfully hatched, eight out of twelve which were placed under the hen proving fertile. M. Parisot states that he can preserve a thousand eggs with his preparation for the sum of fifteen cents.

The Grazier and Breeder.

METHODS OF STEER FEEDING.

In steer-feeding experiments at the Pennsylvania station, with steers confined in single stalls as compared with others confined in a large box stall having as many square feet of space per steer as was contained in each single stall, there was found to be no difference in the amount of bedding required to keep the animals clean. Neither was there any difference in feed required to produce a pound of gain that could be attributed to a difference in the method of confinement. There was found, however, a marked difference in the amount of labor necessary to care for the two lots; being 50.83 per cent. greater for those kept in single stalls than for the others. A comparison of different methods of watering was made where one lot was kept in stalls and supplied with water constantly before them, and another lot was kept in similar stalls, but received water but once a day, when they were turned into a yard that contains a large tank. Of these two lots the one having water constantly before it maintained a better appetite and made somewhat more economical gains than the other lot. There was also a difference in amount of labor necessary to care for the two lots. The report states that "steers in pens furnished with automatic watering basins require about one-half as much

time of the attendants to properly care for them as was required to attend to the same number of animals kept in stalls and turned out in a yard to water." This difference is, however, largely covered by the difference between the pen and the single-stall system, only about six per cent, of extra labor being required to accomplish the watering where the steers were turned out from single stalls.

FARMER'S ADVOCATE.

TIME WILL TELL.

It has been declared in some circles that unless feeding cattle can be bought on a three-dollar basis there will not be a normal number of young cattle put into feed lots this fall. Between recent cattle history and corn crop prospects the American steer is not a popular quantity in farming and feeding sections at present, and with the country in a selling humor, there is every prospect that even a three-dollar basis for a good class of feeding steers will not stir up much of a demand from the small feeders. There is also a prospect that nine months will see more or less men wishing they had put in a carload or two of cattle. Keep your eye on the big feeders this fall and you may get a pointer.—LIVE-STOCK WORLD.

RAISING CALVES WITHOUT MILK.

It is an extremely unwise policy to feed for veal or for beef the heifer calves from valuable and good milking cows. There are far too many unprofitable cows in the country, and the heifer calves from good milkers ought to be grown to take the place of their mothers when their days of usefulness shall cease, and also to replace the poor cows. As milk is an article of diet in increasing demand, many farmers are desirous of getting the calves off their natural food as early as possible, and the problem to be solved is how to keep and grow the young animals.

Several excellent calf meals and milk substitutes are on the market, and a man may now sell all his milk and still raise the calves from his best cows, so as to build up and strengthen his own herd, and also supply better material, if he has it, to his neighbors for the same purpose. Some persons, however, prefer their own mixtures. The following formula will make a very fair milk substitute: Flour 16 2-3 pounds, linseed meal 33 1-3 pounds, finely crushed linseed cake fifty pounds. Two and a half pounds of this mixture per day will be required for each calf. Scald it in boiling water, then add enough more water to make two gallons, and add a little sugar and salt before feeding.

As the result of a considerable amount of experimental work, the following mixture is said to give most satisfactory results: Wheat flour, thirty pounds; cocoanut meal, twenty-five pounds; nutrium, twenty pounds; linseed-meal, two pounds; dried blood, two pounds. One pound of this is added to six pounds of hot water, stirred for a few moments, allowed to cool to 100°, then fed to the calf from a pail or calf-feeder, the latter preferably. The calves are taken at seven to ten days old, and at first are fed twice a day on a ration of three pounds whole milk and one-half pound of the above mixture; in a few days—four to seven, depending on how the calf thrives—it is put on the full ration of calf meal. Wheat flour tends to keep the bowels from becoming too loose. Cocoanut meal contains twenty per cent. protein and nine per cent. fat.—C. G. F.

“Mass. Ploughman.”

THE PROFIT OF KINDNESS.

Says a writer in the “Farm Journal”:

“My horse knows me as far as it can see me, and as I leave the wagon will look after me and watch for my re-appearance; then, if I wave my hand will come to me. Will yours do that?”

Right in that short paragraph lies a principle—the principle of kindness.

That principle is a harbor of safety for some men. Others avoid it and wreck their fortunes on the rocks of unkindness and spiteful usage. A boy once said to us:

“Father always speaks to the horses, the dog and me as if he couldn't bear to have us round.”

Think how much that man missed in the kindly loyalty of boy, horses and dog.

What is the matter with some men on the farm? They strike and scold cattle and horses and boys and everything else that dare not strike or talk back. And yet they are not unkind men at heart. Let a neighbor be in distress and they will do anything to relieve him.

They have got in the habit of loud speech and rough usage. It is costing them good money every day, but they don't see it.

Think how many weary steps that man whose words serve as our text, saved in catching his horse in pasture. Then, besides, does any one think the animal did any less work for loving his master as he did?

It is of especial importance that we deal kindly and gently with the cow if we expect the best possible profit from her service. The shrewd, far-seeing dairyman studies how to promote the comfort and contentment of his cows. “He knows where his bread is buttered.” He keeps his mind alert to know what cow comfort is. For this reason he is gentle, quiet and patient, even with a fractious, ill-tempered cow. He banishes the cramped, confining stanchion; the deep and dangerous manure gutter; the crowding of cows uncomfortably and unhealthfully together in the stable. He has clear convictions as to what constitutes a well lighted, well ventilated, clean, healthful stable room.

Through all his management runs this principle of kindness, not only because it is the humane thing to do, but also because it “pays”.

In no other way can the boys, the hired men, the cows, the horses and all the animals or life of the farm be made to feel contented and happy on that farm. Every owner and manager of a farm should

remember always, that he is the prime source from whence proceeds the spirit and atmosphere of that farm. He is to decide whether it shall be a genial, kindly farm life or not. And in no other way can it prove a truly successful, happy farm life for him and all concerned.—HOARD.

The Flock.

BRITISH SHEPHERDING ENVIED

After exploring the land with the view of ascertaining the secret of Great Britain's high reputation for agriculture, an American saw nothing so much to admire as the sheep-farming of the Wold districts, where the flocks spend the greater part of their lives between hurdless, feeding on green crops or roots, and while doing so depositing bountiful legacies of manure for the enrichment of future crops. This is a novel spectacle for many foreigners, there being few countries or climes that will produce root and green crops for sheep all the year round, as is done in the British Isles, climate being the chief preventive. We often grumble at our sunless days in summer and at the fogs, vapoury gloom, mists, and unpleasant conditions of other seasons, without reflecting that our fickle, ever-changing climate, dismal at times though it be, has its compensations.

The American explorer was so enamoured with our arable-land shepherding that he pronounced an opinion which is probably not altogether correct—that "the poorest part of England, on the thin, chalky soils, is the most profitable to farmers." This pronouncement would probably have passed unchallenged thirty or forty years since, for in the halcyon times for farming, from about 1853 to 1876, no feature shone out therefrom more resplendent, or seemed worthy or greater appreciation, than the arable sheep farming of the hills; but a great many things have happened since then. The wheat and barley crops grown in alternation with those hurdled off by sheep, were the more value at that

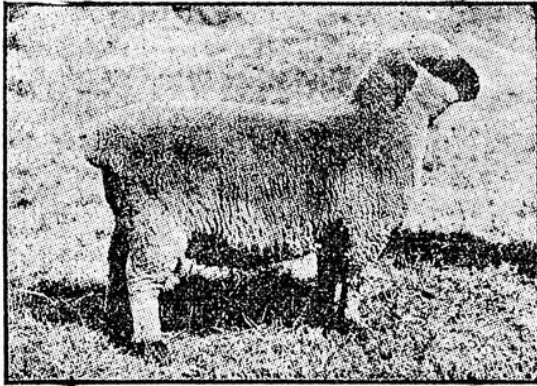
period than they are now. And in drouthy summers when it is difficult to provide winter keep for the flock, and sheep as well as corn depreciate in value, chalk-land farmers find little indeed to make a profit out of, and often lose money. On the other hand, both the dairy interest and Shire horse breeding have become much more profitable, and while the latter is certainly at the present time even more so than shepherding on thin, chalky soils, there are some who deem good pastures for dairying the most likely to yield remunerative returns to farmers of limited means. In fact, I hold in my hand an agricultural journal bearing date Sept. 1, in which an agricultural correspondent states broadly, "Dairying is the most profitable and profound a great many would consider pedigree mising branch of farming." I apprestock-breeding a far more remunerative business for a tenant farmer possessed of the necessary capital than dairying, but it all depends on a variety of circumstances, in which not only the depth of a man's pocket, but his intuitive knowledge and skill, have play.

The most important feature in this American's report in his belief that the British system of hurdling off green crops could be carried out quite as effectually in the United States as here, except in winter, when, he admits, the sheep would have to be removed to barns or sheds. He is so much in love with the idea that he deals with such details as making light portable hurdles of pine, and sheltering the folds with broad canvas sheeting or tarpaulings at seasons when fierce storms or bitter blasts prevails.

No doubt doing the latter would be requisite far more in the United States than in England, but in all probability it is not adopted here to one-half the extent it ought to be. Most flockmasters limit their sheep-sheltering to building lambing folds, but canvas sheeting might often be stretched to advantage to protect sheep, and especially young lambs, against storms and keen blasts. When any animals feed in comfort they thrive better. Wreathed hurdles afford some protection, no doubt,

and when sheep run in pasture fields there are often fences or banks at the boundaries for them to lie under when storms drive. The avidity and speed with which they avail themselves of such shelter whenever they can ought surely to be held to prove the utility of sheeting being provided whenever seemingly needed. This is a lesson which may be laid to heart whoever may teach it.

AGRICOLA.



HAMPSHIRE DOWN RAM LAMB.

One of Second Prize pen, and Reserve Champion pen of three at the Royal Show, and First Prize for single ram lamb at Salisbury Fair 1903.

Sold at the Earl of Carnarvon's sale at Highclere

The Horse.

HORSE BREEDING IN BELGIUM

By Baron de l'Epine

Since very remote times Belgium has produced a national horse. Tacitus says that under the Emperor Diocletian, so many horses were demanded from the Belgians, that they complained of not being able to furnish them.

In the twelfth century, during the reign of Richard Cœur de Lion, the exporting to Great Britain of Belgian horses for breeding purposes commenced. This trade reached its height in the reign of John, in the beginning of the thirteenth century. The

historic documents of the time indicate that certain shipments consisted of about one hundred stallions, the greater number of which were taken from Flanders, and that these became the progenitors of the modern Clydesdale.

Napoleon I. regarded the Ardennais-Belgians as his best war horses. The endurance and the quiet temperament of the Ardennais horse have become proverbial since the famous Russian campaign. Of all the French artillery horses only the Ardennais brought their cannons back to France.

Horse raising in Belgium is a source of national wealth. Since 1830, the time of the foundation of the Kingdom of Belgium, the Government has been active in developing this source of wealth by offering large encouragement to private enterprise, and by controlling the industry according to well adapted rules. Since then, no stallion is allowed to stand for the improvement of stock unless he has been previously accepted by a commission named by the Government. Each year the permanent provincial councils in each province appoint a commission of three members, who may be re-elected annually; this commission goes to the chief town of each division during the month of October and all the breeders and owners of stallions are obliged under penalty of a fine varying from 50 to 500 francs to bring forward their breeding horses over the age of three years. This commission accepts or rejects the stallions, awards first, second and third premiums, as well as making honorable mention of good horses; they give "premiums of conservation" to stallions of six years or more and confirm the "premiums of conservation" previously accorded, when a horse has received two first or two second premiums in two consecutive years he is given a "premium of conservation" of from 500 to 1,200 francs, payable annually as long as he is not declared unfit for breeding purposes. In the month of March the stallions which obtained the first and second premiums in their division in the month of October preceding, meet in the chief town of each province to compete for the premium for that province, which

amounts in some cases to 1,500, 3,000 and 5,000 francs. The horses that obtain the provincial premium are not allowed to leave the country, under penalty of a fine equal to the premium obtained. These are some of the official regulations to which all the Belgian stallions are subject. Further, there exists an institution formed under the auspices of the state, which is called the "Belgian Horse Society." The members of which it is composed are all breeders of Belgian horses. Its affairs are administered by a council elected half by the Government and half by the members. The funds come from a Government subsidy of 21,000 francs, members' fees, and gate receipts at the exhibitions.

The objects of this society are:—(1) to keep the official "Belgian Stud Book," receive applications for registry and transfer, and issue certificates; (2) to hold at Brussels in June of each year, under the patronage of the King, a large meeting of horse breeders; (3) to present each year a report to the Government a report on the raising of horses, and to propose proper measures for the improvement of the rules in force to maintain the Belgian horse in all its purity.

Independent of the examinations and meetings referred to above, the provinces, the agricultural communities, and the towns organize each year an exhibition of breeding horses. Under these wise measures horse breeding in Belgium has taken an important place, and the quality of the Belgian horses has become well known throughout Europe. Germany, Russia, Switzerland and France have, after trial, chosen the Belgian horse to improve their studs.

In 1900 the Belgian Government made an appeal to their best breeders, and as a result 24 horses were sent to the Paris Exposition, where they attracted much attention. Besides awarding them 18 first prizes, the international jury acknowledged the superiority of the Belgian horses by giving to "Brin d'Or" (a Brabancon horse) the championship of the heavy classes, and to "Spirou" (an Ardennais horse), the championship of the light

classes. There two Belgian horses defeated all competitors, Clydesdale included. The principal reason the Belgian horse is superior to his competitors, as declared by the international jury, is because of his symmetrical development, which is such as to give him great power for draught purposes.

THE BELGIAN HORSES

There are two classes of Belgian horses, the Ardennais and the Brabancons. The Ardennais are bred in the south of Belgium, in the mountainous part of the Ardennes, where the altitude is high, the ground rough, and the climate severe, resembling that of Canada. The Ardennais weighs from 1,300 to 1,700 pounds. The Brabancons are the direct descendants of the ancient Flemish race, so much appreciated by the English of the twelfth and thirteenth centuries. They are bred in the interior of the country and on the coast, on low, flat land. Their weight is 2,000 pounds and upwards.

The Belgian horse is not an upstart. He strikes the roots of his genealogical tree deep into the national soil. This is why he has proved to be so reliable and impressive as a sire. Wherever the Belgian stallions have been used they have stamped their characteristics upon their descendants.

Belgian exports annually more than 20,000 horses, and but for the stringent regulations which prevent the sale of the better horses, they would export far more. A large number of these exported horses are for breeding purposes. The heavy horses are also exported for use in large cities.—Paris, Berlin, etc. The lighter horses of the Ardennais race are sold for use in the artillery of the various European armies. At the present time this market is of great importance, and few farmers anywhere are producing horses of the right class. It is for this reason that there is a desire in many countries to breed the Ardennais horse, for which there is an almost unlimited market. A number of Brabancon and Ardennais horses will be exhibited at some of the leading Canadian exhibitions this fall.—FARMING WORLD.

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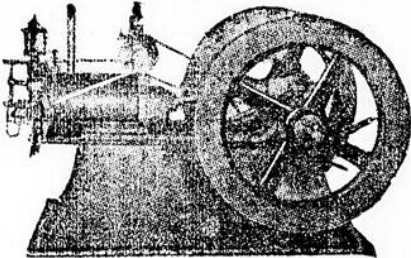
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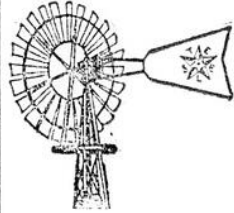
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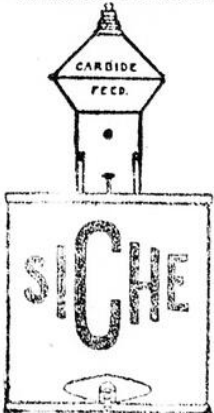


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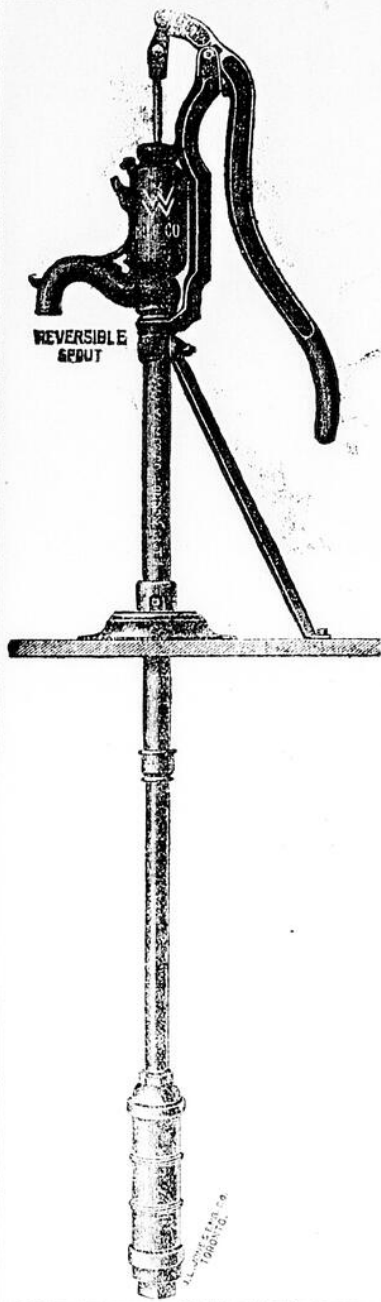
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