

Nov., 1884

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AND HOME MAGAZINE

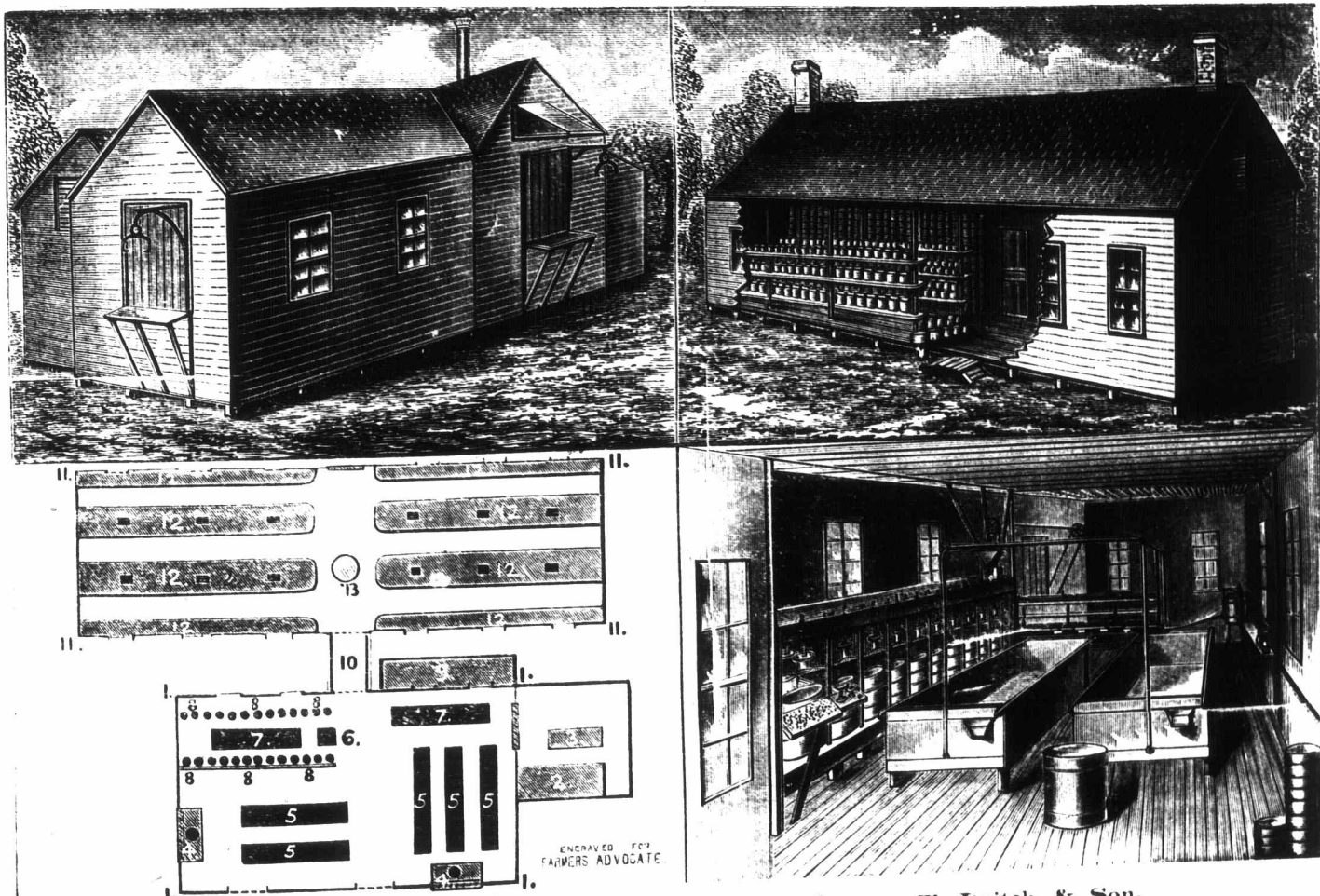
FOUNDED, 1866.

VOL. XIX.

LONDON, ONT., DECEMBER, 1884.

Whole No. 228.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.



Cheese Factory at Glencoe, the Property of Messrs. T. Leitch & Son.
1, Cheese Factory; 2, Boiler; 3, Engine; 4, Receiving Platform; 5, Milk Vats; 6, Curd Crushers; 7, Curd Vats; 8, Cheese Presses; 9, Whey Tank; 10, Passage Way;
11, Curing Room; 12, Curing Shelves; 13, Stove.

The above engraving represents the factory of the well-known cheese men, Messrs. Leitch & Son, of Glencoe. The dimensions of the factory are 27x42, height of posts 10 feet, size of curing room 72x27, with engine room 16x16. This establishment is calculated to use the milk from 700 cows. The cost of construction together with the appliances, which are of the most approved kind, was \$3,000. Messrs. Leitch & Son commenced cheese making nine years ago. The first year they only made twenty seven tons. The present season they have made three hundred tons in their five factories. In the one illustrated eighty tons were made this year. The

average price of this season's make realized 11 cents per pound. They make only one class, Canadian Cheddar, two-thirds of which is white cheese, only one third having any coloring.

As the season has arrived when subscribers renew their subscriptions, a practical method of showing their appreciation of the FARMER'S ADVOCATE would be by sending in the name of a new subscriber along with their own, and secure one of our beautiful premiums.

We want live, energetic agents in every county to canvas for subscribers to our paper. We pay a liberal commission to agents who devote their time to our work. Send for specimen copies.

If there is any advantage in trade depression beyond that of warning people not to overdo their business, it is, that the usual markets being glutted with manufactured products, new avenues of trade will be sought.

Make your stock as comfortable as you can be by shelter and feed. Better to feed a few bushels of wheat low at the present prices than have your stock come out huddled in the spring. You have a better chance of making money out of your grain by either feeding or selling it than by storing it. Stock of all kinds pay if well cared for.

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The FARMER'S ADVOCATE and HOME MAGAZINE is published on or about the 1st of each month, is handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for dairymen, for farmers, gardeners and stockmen, of any publication in Canada.

TERMS:—\$1.00 per year, in advance, postpaid; \$1.25 in arrears. Single copies, 10 cents each, postage prepaid; sample copies free. Subscriptions may commence with any month. Remittances at the risk of the subscriber unless made by registered letter or money order. Subscribers who desire to change their P. O. address must send both old and new address. Remember that the law requires the subscriber to notify the publisher whenever the former wants the paper stopped, and all arrearages must be paid. The date on the address label shows when the subscription expires.

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IMPORTANT ANNOUNCEMENT!

We have arranged with the publishers of the most extensively circulated, leading representative, and what we consider the most reliable papers, to enable you to procure any of them at the lowest possible rates.

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Toronto. The leading Reform paper of the Dominion.

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The Farmer's Advocate & Home Magazine and either of the above for \$1.75.

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The cash must in all cases accompany the order, and no commission can be allowed on the above rates.

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Read our list of choice, new premiums offered in another column of this issue for sending in new subscribers. Send for sample and begin your canvas now.

When sending your subscription try and avoid sending postage stamps. Five per cent. additional should be sent when stamps are remitted.

Please examine your address label, and if **YOUR SUBSCRIPTION HAS EXPIRED,** or is about to expire,

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You will find envelopes and blank forms for the purpose enclosed herewith. To avoid mistakes send Post Office order or registered letter.

All subscribers whose labels are marked "Jan. 85" should understand that their subscription expires with this (Dec.) number.

Our Monthly Prize Essay.

Our prize of \$5.00 for the best original essay on "The best Methods of Encouraging Tree-Planting on Farms," has been awarded to P. E. Bucke, of Ottawa, Ont. The essay appears in this issue.

A prize of \$5.00 will be given for the best original essay on "The Future Management of Agricultural Exhibitions." Essays to be in not later than the 10th December.

We purpose setting aside *One Hundred Dollars* to be expended annually in promoting the interests of the farmers. Several suggestions have been made to us with regard to the best method of expending this amount, some saying it could be advantageously given for prizes at exhibitions, some for the encouragement of farmers' clubs or agricultural education, some for the best conducted farms, etc. We now, therefore, offer a prize of \$5.00 for the best original essay or the best suggestions on "How can the Farmer's Advocate best expend \$100 annually in the farmer's interest?" Essay to be handed in not later than Jan. 15.

1884.

It is with feelings of pleasure and gratification that we now issue this the last number of the 19th volume of your journal. We are satisfied that we have done our best to give you a volume that no person need feel ashamed to leave behind—one that will be referred to when we are forgotten, one that will tend to good. There are undoubtedly some defects and errors; perfection is not yet attained. Many improvements have been made in your journal during the past year. We return our sincere thanks to all of you for your continued and generous support, particularly to those who have assisted in increasing the circulation so much during the past year, and are pleased to inform you that despite the cry of hard times, in no year since its commencement have we ever added so many new names to our subscription list. Our aim in the future will be as it has been during the past, to improve your journal and make it of more value to your families and to the country. Its improvement or degeneracy remains in your hands. If it has omitted or neglected its duty to you, its pages have always been open to you, and its existence depends entirely on your voluntary support. If your ADVOCATE refuses any of your valuable contributions to its pages that would be beneficial to farmers, for some other interest rather than yours, then we should consider ourselves unworthy of your support. We shall be pleased to secure your continued patronage and support, hoping to receive a continuation of the support of all our old subscribers and even as large an increase of new ones as during the past year. Wishing you all a merry Christmas, we bid adieu to 1884.

Editorial.

Duties of Farmers' Clubs.

Apart from the duties which farmers owe to themselves and their families, the duties which they owe to the state ought to be sufficient incentive to make them organize. The state is merely the name of individuals in their collective capacity, so that what is good for the whole must be good for the component parts. It is for the benefit of the state that at least a majority of its citizens are people of disciplined intelligence. In this country, where a large majority of the electorate belongs to the farming community, the education of the farmers is a matter of pressing urgency, and the most practical school is farmers' clubs. Here subjects can be discussed which will be to their interests both in their personal and in their collective capacity. First of all let them bear in mind that it is in unorganized communities that sharpers seek their victims; amongst societies an insult or a fraud perpetrated on an individual is resented by the whole body. We thus hear every day of farmers being victimized in some way or other.

After the club is formed, the next precaution to be taken is that it stays formed. It must come to stay, and the matter for consideration is, What are the influences which tend to create disorganization? The most effectual of these are the discussions of subjects from which the members derive no real practical benefit, and the election of members who have personal or political aims that are foreign to the farmer's interests. From a political point of view there are two ways of preventing a disruption of the club. First, banish all questions which have any relation to political parties; and, secondly, ballot out or banish all hot-headed politicians. Sometimes there are political issues which have a direct bearing on the farmer's interests, in which case their discussion should not, if possible, be evaded; but such questions should invariably be discussed from principle and not from party lines. There is in every locality farmers who believe in elevating themselves in preference to elevating party, and the discussion of such questions should be strictly confined to these men. If there is the least symptom of the club becoming endangered by such discussions, postpone their consideration until the questions cease to become party issues. There are also farmers in every locality who have interests to serve which are antagonistic to those of the practical farmer. Such men will bring destruction on any club. If the plain, honest farmer, those whose only desire is to receive and impart such information as will be of practical use to them as farmers and citizens, begin to see that their labors are attended with success, they will remain united, and no power can break them asunder.

Free.

Subscribers for 1885 sending in their names now will receive the last three numbers of the present year free.

Attention!

We must ask our readers not to select premiums or forward money for books except those which have been advertised in the last two issues, as we shall not be able to supply them, and it would necessitate the returning of the cash.

How to Save the Manure.

No. IV.

2. *The use of other absorbents without fermentation.* In speaking of the use of straw as an absorbent we stated that it should be fermented under cover; but this may be taken with some degree of modification. Shelter is only necessary to ward off heavy rains which usually take place in autumn; but if the rainfall is not great, or if the heap can be temporarily topped off previous to heavy showers, little or no damage will be done.

In considering the saving of the manure with straw as litter, we dwelt on the question at considerable length, for this system can be utilized by every practical farmer, but absorbents other than straw can only be used to the best advantage by some farmers. The most valuable, and usually the most accessible, of all other absorbents is muck. Many farmers have the impression that the only value dry muck possesses lies in its use as an absorbent. When it is considered that muck is the product of decayed vegetation, it will be seen that it must contain all the elements of plant food, so that it is as much of a complete fertilizer as animal manure, but it is chiefly valuable for the nitrogen it contains. Comparing peat of average composition with the manurial value of straw, the former will be worth \$3 a ton, while a ton of the latter will scarcely be worth \$2. It has been further estimated that a ton of dry peat will occupy two cubic yards of space, so that every farmer can now reckon that it will not require a very large bog to produce the value of his whole farm. The farmer who owns a swamp that can be easily drained has a mine of wealth. When the soil is clayey or sandy, muck can be used with great advantage by putting it directly on the cultivated land, mixing it well with the soil, or it may be put on the meadow or pasture, and a small quantity of lime, say a bushel to every load, will hasten its conversion into plant food. But this mode is great extravagance compared with utilizing the muck as an absorbent in the stables. In the latter case the muck must be dry. When fully saturated, seven-eighths of its weight is water, and when it is considered that straw will only absorb twice its own weight of moisture, its value as an absorbent, compared with that of straw, will readily be seen. The farmer's own judgment, under the varying circumstances, is the best guide as to the best mode of securing the muck in a dry condition. The most economical manure savers not only use muck in the stable gutters to absorb the liquid excrements of the stock, but when straw is used for littering some of the animals, it is also put in layers on the manure heap for the purpose of taking up the gasses which would otherwise escape during the process of fermentation. Amongst other absorbents available for some farmers may be mentioned sand, road dust, saw dust, ditch cleanings, scrapings of dry stable manure, clay, etc. Sand is especially valuable when put on clay soils, as it greatly improves its mechanical texture. In using the different kinds of absorbents for various soils it should be the aim of the farmer to bring his field as near as possible to the condition of a loam.

In the application of manure saved by the use of earthy absorbents, much labor may be

saved compared with the straw system. It may be drawn directly from the stable to the fields and immediately spread. By this method the loss is reduced to a minimum, and the only danger to be avoided is the spreading of the manure on steep hill sides, where the spring rains are liable to wash the substance away before the frost is sufficiently out of the ground to enable the soil to absorb the drainings.

3. *The construction of tanks to gather the liquid.* This method is accessible to every farmer, but its utility is more questionable than that of the other modes of saving the manure. The barn yard should be paved with some water tight material, slightly concave, so as to prevent any drainings from flowing out of the yard. In the centre a tank or cistern is built, the size depending on the quantity of stock. The quantity of urine produced by the stock can be calculated from figures given in No. I. of these articles, and the size of the cistern to be built thus ascertained, making due allowance for the quantity of rainfall in case the yard is not under cover. The liquids from the stable gutters may be led into the cistern by means of aqueducts, and the drainings from the solid manure will run into the tank by means of the concave nature of the foundation. The liquid may be disposed of (1) by pumping it on the manure heap, using plenty of straw for the purpose of retaining it, and (2) by sprinkling it on the fields with a watering cart. The first objection to the tank system is that the pipes or drains leading the urine into the cistern are apt to freeze and stop the flow. In cases where the liquids are sprinkled on the fields, the work must be done about the time of sowing or planting; otherwise, except in a retentive soil, much of the liquid may be lost. Every farmer who contemplates the erection of new barns and stables should take the manure question into serious consideration.

Every farmer should now commence to save at least a part of his manure. He will soon work into a system best suited to his conditions. Indifference cannot be indulged in much longer. In the Northern and Eastern States, where the soil was originally as fertile as ours, farmers are now compelled to travel 12 to 15 miles to the livery stables of the large cities, and team the manure to their farms, paying three to four dollars a ton therefore, and scarcely ever wait to inquire whether the substance is leached out of it or not. Other farmers are compelled to restore the fertility of their land by feeding large numbers of animals for the manure alone, scarcely ever waiting to calculate any other source of profit from feeding. Still others are making extensive purchases of commercial fertilizers, running great risks of their being adulterated. And yet, with all these facts before their eyes, thousands of our farmers still regard their manure heap as a nuisance.

(TO BE CONTINUED.)

SIR,—I had almost made up my mind not to take the *Advocate* for this year, as I have so many papers coming weekly, but as I have been looking over the last magazine I have concluded to take it another year. I wish you success.

J. E.
UNION ROAD**Constitution and By-Laws for Farmers' Clubs.**

For farmers contemplating the organization of clubs, the following rules will be found useful. They are not given for the purpose of being copied, but merely as a general guide. Each club should take into special consideration the circumstances and modes of agriculture in its locality, and make these the guiding features:—

CONSTITUTION.

ARTICLE I.—This organization shall be known as———(insert the name here.)

ARTICLE II.—The objects of this club shall be the cultivation of friendship amongst its members, the improvement of their minds by discussions, essays, and readings on subjects pertaining to agriculture, the amelioration of the farmers' condition, and especially the acquisition of such knowledge as will be of practical use to the club in their daily pursuits. It shall be their endeavor to cultivate friendly intercourse with other farmers' clubs with the view to advancing the interests of the farmers collectively, and for the purpose of obtaining acquaintance with those influences which are brought to bear against the farming community, and are prejudicial to its advancement.

ARTICLE III.—The membership shall consist of two classes, viz., active and honorary. The former shall include all persons over the age of ——years who are actively engaged in the pursuit of agriculture or any one or more of its branches, and shall have paid an annual fee of ——cents. The honorary members shall consist of such persons as take an active interest in agricultural affairs or in the success of farmers' clubs, whether they are engaged in agriculture or not. All new members shall be elected by ballot at a regular meeting, having first been duly proposed and seconded by members of the club at the last meeting preceding their election. Active members shall be elected by a two thirds vote, and honorary members shall require the unanimous vote of the members present.

ARTICLE IV.—The officers of the club shall consist of a president, vice president, secretary, treasurer, and a committee of management, consisting of three members. (Here the usual duties of these officers may be copied as separate articles from any society.)

ARTICLE V.—In the absence of any officer a substitute may be appointed, *pro tem*, by the club. Any officer or member guilty of misconduct or neglect of duty may vacate his office or be expelled by a vote of two-thirds of the members present at a regular meeting, and office vacancies may be filled by the same majority.

ARTICLE VI.—Additions to or alterations in the constitution, by-laws or rules of order, may be made by a two thirds vote of the members present at a regular meeting providing specific notice of the same shall have been given in writing at a previous regular meeting; and any by-law or rule of order may be suspended for the time being by a two-thirds vote of the members present.

BY-LAWS.

I.—Regular meetings of the club shall be held at———on———, unless otherwise ordered; and special meetings shall be held at such times and places as shall be determined

by a majority of the members present at a regular meeting.

II.—Seven (?) members shall constitute a quorum for the transaction of business.

III.—In the appointment of special committees for the purpose of making arrangements for exhibitions or any duties tending to promote the interests of the club, the first member named shall be the convener, and the committee shall afterwards elect its chairman; but no committee shall make any contract binding on the club without first obtaining its consent. All committee reports shall be handed into the club in writing. The chairman shall have no vote in any of the proceedings of the committee except in case of a tie.

IV.—No religious or political issues shall be introduced in any debate, discussion, essay, or address at any of the regular meetings of the

On the Wing.

OUR NORTHWEST RESOURCES.

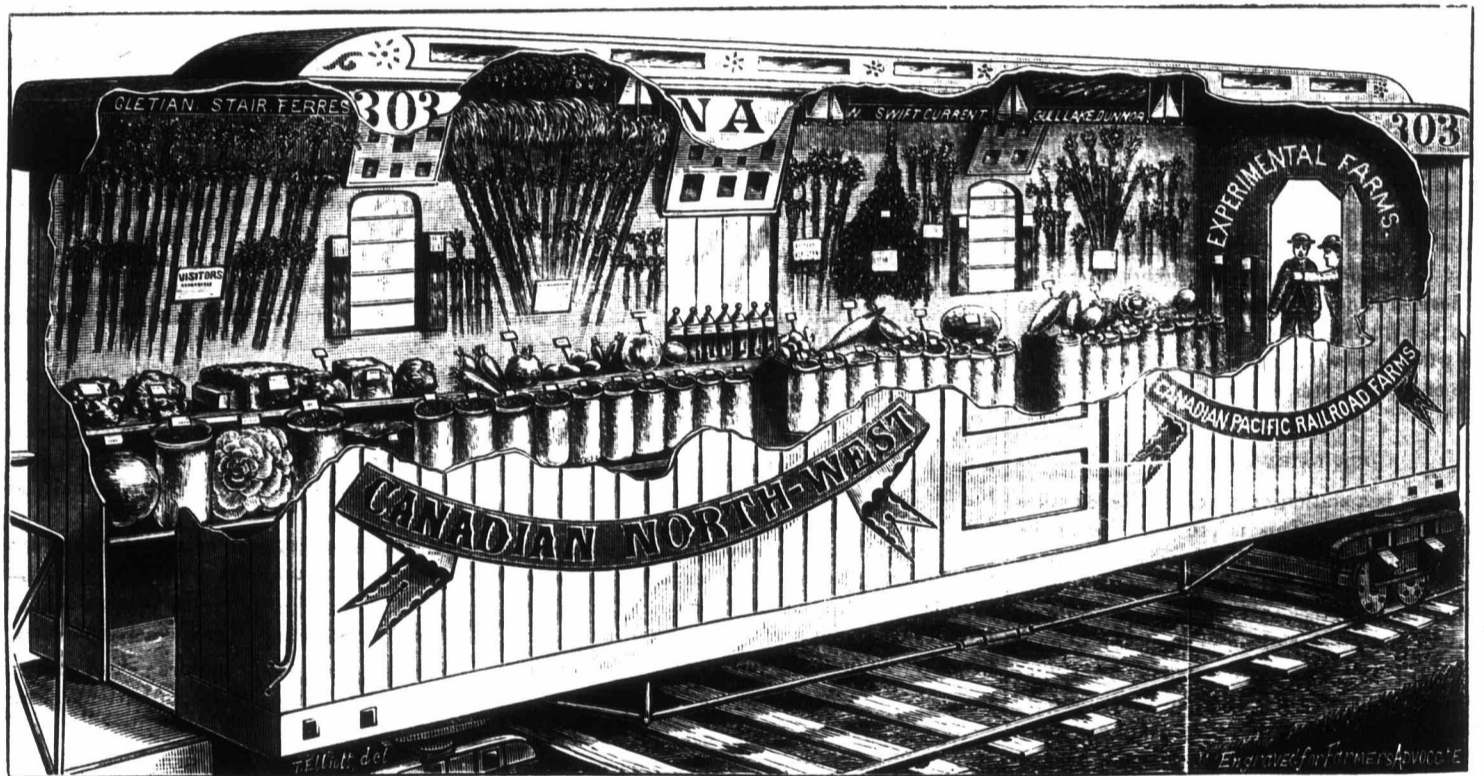
Since writing our last we have taken a few short flights. The first was to St. Thomas, to see the great missionary car of our Northwest Territory. The car has an imposing, attractive appearance externally; in the interior the products of our Northwest are neatly arranged on either side, showing the cereals, grasses, roots, fruits, woods, vegetables, wool and mineral productions. This car is fitted up by the C. P. R. Company, and shows to the public the products of several experimental farms that have been cropped in different localities along the line of the railway.

The experimental farms are ten in number, and are situated at different stations along the line between Moose Jaw, about the centre of

more than realized, the average product per acre from all the farms being as follows:—Wheat, 21½ bushels; oats, 44½; barley, 23½; peas, 12½. Each farm had also a small plot in roots and garden vegetables, which gave results equally satisfactory. These tests are sufficient to prove that cereals, roots, and garden produce can be successfully raised 3 000 feet above the sea level, and that the seasons are sufficiently long for harvesting these crops, which can be done before the first of September.

We extract the following remarks of Sir Richard Temple, one of the most prominent members of the British Science Association, who lately visited this region, reprinted in a pamphlet just issued by the C. P. R. :—

“Almost everywhere they saw rich soil. Most of them had expected that they would find tracts of arid waste, or that if they saw



The Great C. P. R. Missionary Car of Our Northwest Territory.

club, nor shall any personalities or objectionable language be indulged in, or any other sayings or actions which will tend to mar the harmony of the meeting.

V.—Each member shall pay his annual fee to the treasurer within one month after his election, and shall not be eligible for office or for taking part in any of the proceedings until such fee is paid, providing he has been duly notified of his arrears by the treasurer. In case the fees fail to make up sufficient funds for the requirements of the club, a tax may be levied on the members by a two-thirds vote to supply the deficiency. A.

The most important crop you should learn to raise is a crop of manure. If you succeed in raising this, other crops will raise themselves.

SIR,—I and my family would rather have the FARMER'S ADVOCATE than any other dollar's worth coming into our house. R. L. SARNIA, ONT.

Assiniboia, and Calgary, near the base of the Rockies, embracing an extent of 350 miles. The object of the company in establishing these stations was not only to ascertain the natural capabilities of the soil, but also to satisfy intending immigrants that this section was not unfit for settlement, as had been asserted by various newspapers, and that the loudly-condemned alkali deposits did not prove a barrier to the raising of crops. It was not intended to raise any crops last season, the idea being to cultivate and prepare the ground thoroughly for 1885; but some practical men in charge of the work were so fully convinced of the capabilities of the soil that it was decided to test a few plots of various crops on the newly broken up sod. The sod not having had sufficient time to rot, the test cannot be regarded as doing justice to the land, especially when it is considered that many good authorities maintain that the alkali deposits obstruct the growth for the first season or two. However, the expectations of the company have been

rich soil it would be largely interspersed with specimens of gravel, rock, and soil not suitable for cultivation; but this idea proved to be entirely false, for he declared without exaggeration that on the whole way from Winnipeg to the foot of the Rockies there was hardly a foot of ground that did not seem to be capable of being turned to human use. Estimating the distance to the foot of the Rockies at a thousand miles, there was for this distance one unbroken area of land more or less fertile and capable of being turned to the advantage of man. Cereals were grown upon many farms exclusively; some of the greatest farms in the country were wheat farms almost entirely. They saw in many parts of the country specimens or exhibits of the products of the farm. The C. P. R. Company had set a very excellent example by having model or pattern farms close along the line of railway, to show what the country was capable of producing. In inspecting these, while they find nothing to equal the monster cabbages shown at the exhibition here,

ec., 1884

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yet they saw good turnips and potatoes. They had heard in England that there would be great difficulty in growing wheat at the altitude of this country, it being too high above the sea, but this idea was entirely falsified by what they saw, for wheat grew well 2,000 feet above the sea; at Calgary at 3,000 feet; and at Padmore at 3,500 feet. Hence there was nothing in the altitude of this country to prevent wheat being grown on an immense scale."

The Railway Company offer their lands for sale within the 48 mile belt along the main line with or without cultivation conditions, at the option of the purchasers, at prices ranging from \$2.00 per acre upwards; when the sale is made subject to cultivation, a rebate of one half of the purchase price is allowed on the quantity cultivated, and will be applied on the next payment falling due. Payment can be made in full, or in six annual instalments. Agents are stationed at all the principal towns along the main line, to supply information as to lands for sale in their districts. In addition to the company's lands, free grants of 160 acres can be obtained from the Government, within the railway belt.

The contents of the car are well worth inspection. It is now travelling in the eastern part of our Dominion; if it should be in your vicinity go and see it.

We know it will not be within the reach of many thousands of our subscribers, therefore we deemed it of sufficient importance to you to have the illustration on preceding page made. The wild hops, wild peas and the native grasses were of special interest to us, and would be to you.

OUR DAIRY INTERESTS.

Glencoe is a station on the G. T. R., 30 miles west of London. This is probably one of the largest shipping stations for sheep and cattle in Canada. The cattle fair was not as largely supplied with store stock this year as it generally is; more of the stock had been disposed of previous to the fair than usual. This is a thriving town, having saw mills, grist mills, foundries, etc. Probably the most important industry carried on here is the cheese factory; this and five other cheese factories are owned by T. Leitch & Son. They have made and sold more cheese from this factory than has been sold from any factory west of London. Their cheese has a very high reputation for its excellent quality. The firm is reliable in every particular and have the confidence of their patrons; merchants dealing with them can depend on them; their yea means yea, and nay, nay. This is a very important consideration. We give on first page of this issue the plans and dimensions of their factory at Glencoe, as they may be of advantage to those about to erect factories.

On the 14th of November we took a drive in the country 22 miles north of this city. The farm work was well advanced, and everything appeared ready should winter set in at any time. The stock were grazing in fields. There appeared abundance of grass everywhere. The winter wheat was looking as well as any one could wish, and there is a large quantity of land sown, perhaps too much. At Iderton an auction sale of stock was progressing. Pedigreed and grade stock sold at about 25 to 50

per cent. less than similar animals would have brought last year.

We pressed on into McGillivray. Here less wheat was sown, and grazing appeared to be taking the lead of grain growing. We were much astonished to see so many large herds of really fine cattle grazing. We called at the farm of Mr. G. Smith, ex-M. P. P. He has a fine farm and a very fine herd of Shorthorns, many of which would carry off prizes if exhibited, but Mr. Smith prefers keeping his stock on his farm. He has, by dint of selecting and careful breeding, now a herd that is, and has been for a series of years, improving the stock of the surrounding country. His are principally of the Bates' strain. He related to us a test which he made last February, in which three cows fed on nothing but cut hay and straw and roots, produced a pound of better per day each. Mr. Smith's farm is naturally under-drained, having a strata of gravel about 8 feet below the surface. He informed us that some of his land will graze stock at the rate of 1½ acres per head, which shows the benefit of under-drainage. Mr. Smith commenced under many disadvantages, but has head and hands, and is now in a far better position, we think, than the majority of bankers, manufacturers or merchants. He knows what is his own and gained it honorably. The farmers in this locality appear to be in a very prosperous condition. One farmer in this locality thirty years ago inherited 200 acres from his father; he now owns 1300, all made from the farm and land in this vicinity. We should consider it worth about \$70 per acre. This is a nice thing to make from farming alone.

We called at Mr. John Gibson's; he has also a fine herd of Shorthorns, and is rapidly improving his farm. He is brother to R. Gibson, of the New York Mills herd fame. Neither Mr. Smith nor Mr. Gibson pay as much attention to the show ring as one would expect after seeing their stock. Neither of these gentlemen speculate in stock; they prefer the animal to the pedigree, but do not neglect the latter.

EDUCATION.

We attended a meeting, held in the city of Hamilton, for the purpose of devising means for introducing agriculture into our public schools, and for the establishment of farmers' clubs. Professor Mills, of the Agricultural College, was addressing the meeting when we entered. He contended that too much time was paid to grammar, mathematics and geography by teachers of the young, and too little to writing, reading and dictation, and thought that agricultural subjects might be introduced. The Hon. G. W. Ross, the Minister of Education, expressed his wish to act in his capacity for the best interest of the farmer, but, as yet, could not see his way to make any sudden change. We were pleased with the considerate remarks of these two speakers, and believe if agricultural education were left in their hands that very great good might accrue; but if undue outside pressure is used, and they find it necessary to warp their conviction of right to other purposes, an incalculable injury may be done. No men in Canada hold such high and important positions as Ministers of Education; it is with them that the safety of our country and our homes rests; it is the rising generation that must take the reins of power.

Truth is the only safe corner stone on which to build. We can only hope that the Hon. G. W. Ross and Professor Mills will act in a manner they know to be right. There is no one who wishes for the advancement and enlightenment of the farmers' sons and daughters more than we do. We shall render to Messrs. Ross and Mills all the assistance we can to foster and bring forward any plan they may devise, if they act without bias and solely for the interest education and the enlightenment of the farmers. On the other hand, if we find the reports we have heard to be correct, namely, that the educational plans, the farmers' clubs and farmers' institutes, and the public lecture scheme, are all for partizan purposes, duty will compel us to take an opposite course. It is claimed by many that the country is and has been flooded to a considerable extent with literature in various forms purporting to be for the several interests connected with agriculture, but that the main object is and has been for partizan purposes. We cannot approve of the name agriculture being used as a cloak for expenditure of moneys that are for other purposes.

Sheaves from Our Gleaner.

- Hungry mouths—Weed roots.
- Golden filth—The manure heap.
- Feed your land if you want to be fed.
- How do you spend your winter evenings?
- Deposit the fruits of your labor in the manger.
- How to get wealth and health—Follow nature's laws.
- Where to market your farm products—In the manger.
- Nothing drains your pockets so effectually as the stable gutter.
- "Union is strength;" so that farmers are weak because they are not united.
- Cropping the farm to death is what drives the boys into other and more lucrative pursuits.
- Clean dairymen—clean stables; clean stables—clean cows; clean cows—clean butter; clean butter—big price.
- If you want to lift the mortgage off your farm, keep good cows; if you want to create a mortgage, keep bad ones.
- Liebig calculated that the solid and liquid excrements of a family of eight persons were sufficient to fertilize an acre of corn.
- Put the kitchen and chamber slops on the compost heap, first seeing that there is sufficient absorbent material therein to absorb them.
- Germany can raise agricultural products on land worth \$300 an acre and compete with us in the world's markets, and yet you say there is nothing in agricultural science.
- An ounce of brain is worth a ton of muscle, and yet you overstrain your muscle in half doing your farm operations, leaving your brain to degenerate into nothingness for want of exercise.
- Only 10 per cent. of the butter manufactured in Canada is rated as first-class. More uniformity in the make is required. There are two distinct qualities in demand, viz., the strongly and the weakly marked flavored article.

Special Contributors.

A Chatty Letter from the States.

[FROM OUR CHICAGO CORRESPONDENT.]

The Fat Stock Show this year was larger and better than in former years, and not a few enthusiasts have claimed that old Smithfield has been entirely outdone by this Chicago show. In the cattle department there certainly was a grand display of butcher's beauties, but the swine and sheep departments were conspicuous by their smallness. There was a superior display of Shorthorns. All ages were represented splendidly. In the Hereford class there was a large show, but principally of youngsters. In the thoroughbred Hereford rings the prizes were taken just about without competition, because of the meagre offerings. But of grades and crosses there was a magnificent display of all kinds.

Canada was fairly represented in the Fat Stock Show, and carried off the best premiums of the exhibit. The Polled-Angus steer, Netherwood Jock, owned by Mr. M. H. Cochrane, of Compton, attracted a good deal of attention and admiration. His grade Angus steer, Quality, which took first premium in its class in the slaughter contest, was a fine specimen of the art of feeding and of breeding. Among the prominent Canadians present were the Geary Bros., of London, Ont.

There was a great deal of dissatisfaction this year concerning the awards made by judges; in fact there was more complaint this year than ever before, which shows that the difficulties of judging do not diminish as the show advances in age. The Hereford men seemed to be very much displeased, and while the Shorthorn men had much less of which to complain, they did some open grumbling, and so far as heard from the black cattle men were the only ones who seemed to get as much as they could have hoped for. Considering their comparatively limited display they certainly secured a very large proportion of premiums, and have great cause for feeling well pleased.

A good deal of crowing is done each year by the men interested in the breeds which take the most prizes, but it should be remembered that there is very little to boast of unless the victory is won by actual merit, where the contestants are equal in number, and fairly balanced as to quality. One might naturally think that these annual contests would enable beginners the better to judge of which breed would be best for them to commence with, but the vexed question of superiority among the beef breeds is apparently no nearer settlement this year than it was the first year of the show. Unbiased judges do not appear to be able to discriminate between the best specimens of Shorthorns, Herefords and Polled Scotch cattle, when placed side by side. A man's preferences are largely decided by his pecuniary interests; if he owns Shorthorns, he sees more to admire in them than any other breed. And when it comes to awarding premiums to the different breeds, one as against another, the wearing of the blue ribbons depends too much entirely on the personal breed prejudices of the judges.

The writer contends that it is next to impossible to secure a wholly unprejudiced

judgment when men who are in any way interested in particular breeds of stock are to make the decisions. Judges with strong bias in favor of some particular breed are often taken because of the difficulty of finding men who have had sufficient experience to be competent, but in such cases it would be better to have men who might err from honest ignorance, than those whose better judgment could be blinded by their personal wishes. Had the judges in the last show been practical butchers whose only interest was to favor the animal with best qualities, regardless of breed or owner, there probably would not have been so much bitter complaint. No fair-minded management would think of setting up men to pass judgment on their own cattle, but that differs only in degree from allowing a breeder to pass judgment on his own kind of cattle.

Two steers in the thoroughbred Shorthorn class attracted almost unequalled attention. As they were both white they might have furnished some food for thought to those who have so bitterly waged the "color war." Snowflake, owned by T. W. Harvey, of Chicago, whose fine stock farm is at Turlington, Neb., was as white as it would be possible for a steer to be; his ears and skin were of a delicate pinkish tint, which gave his splendid and carefully groomed white coat a fine effect. His horns were sand-papered and polished as highly as if they were just ready to be placed among the costly bric-a-brac of an elegantly furnished parlor.

Clarence Kirklevington, the Canada West white Shorthorn steer, which did not seem to get his just deserts at the previous show, was the recipient of the highest honors of the exhibit this year. His age was 1,372 days, his weight at time of slaughter was 2,370 lbs., and his carcass sold to a leading Chicago hotel at 12c. per pound. The average gain per day of this animal since birth was 1.74 lbs., which was much higher than any competitive animal of equal age.

There was a very large display of Holstein cattle, and their uniform black and white colors attracted a good deal of attention, but not many prizes. None was entered in the slaughter contest as it would have been folly to do so; but at the same time, if, as the breeders of these cattle claim, they are not only superior for milk but are fair for beef, it is time to make some demonstrations of the alleged fact. It seems about as appropriate to have dairy cows at a fat stock show as it would to have race horses.

P. & J. Fisher, of Goderich, Canada, had some very choice Cleveland Bay and Clyde horses on exhibition. The display of French draft horses was remarkably good. One cannot help thinking, however, how much better these great noble animals would look if they were allowed to carry tails in natural proportion to their immense size. But custom in France decrees that at the age of two years, as soon as the horses are ready to break to work their tails must be cut so as to leave a comparative stump. There, it is said, they are not bothered with flies and the long tails are merely in the way, but since so many of these horses are coming to this land of flies it would seem better to allow the tails to remain their normal length. Not a few novices suppose

that the tails of these heavy draft horses are naturally short and stubby.

The formation of a National Cattle Growers' Association at Chicago, and of a National Live Stock Association at St. Louis, within the past week or two, have been the cause of a considerable amount of discussion in the stock circles of the States.

The Chicago convention was one called by Commissioner Loring, and while it was nominally composed of delegates from all sections, it was chiefly a meeting in the interests of Northwestern ranchmen and of veterinarians who are trying to induce the government to establish a larger inspection service. The men from the far west who are so strongly advocating the adoption of better sanitary laws for the regulation of live stock matters, are perfectly sincere in their wish for better protection, but they have created a very hostile opposition by having a lot of incompetent veterinarians tagging at their heels. They are charged with being in league to filch from the government a large appropriation to be spent in junketing about the country. However, the convention indorsed the Commissioner of Agriculture and the Bureau of Animal Industry which has already made innumerable blunders. Numerous papers on veterinary science and contagious diseases of various kinds were read. The Illinois State Veterinarian exhibited the lung of a Jersey cow which he declared had been affected with pleuro-pneumonia. He had it open for inspection, and stood and carved portions of it in a room crowded with men who were constantly running in and out of the fat stock show then in session. By some opinion was expressed that this was an extremely hazardous proceeding as the disease is said to be very highly contagious. The lung was viewed by many who would not know pleuro-pneumonia from hollow horn, but competent men declared that it was evident that the State Veterinarian did not know what pleuro-pneumonia was. One man who expressed the opinion was Dr. Gadsden, of Philadelphia, who spent many years in England with the disease.

The St. Louis convention also indorsed the animal doctors, but a part of that convention who were in favor of establishing a National Cattle Trail six miles wide from the line of Old Mexico on the South, to the line of British America on the North, who were really opposed to the measure, voted for it because the Northwestern men voted for the pet scheme of the Southern delegates, i. e., the cattle trail.

This cattle trail business will affect Canada as well as the Northwestern territories. The Montana and Wyoming men are opposed to having a National Cattle Trail set apart by Congress, for the reason that they are afraid that their ranges will be overrun with Texas cattle, which they claim will impart the splenic or Spanish fever to the Northern herds. This trail, if made, will be 1,200 miles long, and will furnish a permanent highway for driving cattle all the way from the Rio Grande to Canada on the North.

Another pet scheme of the western ranchmen is to secure the right from Congress to buy or lease the lands that they are now using for grazing purposes. It is against the policy of the Government to place these lands in any condition out of reach of the homesteader.

Cattle Feeding.

BY MARSHFIELD.

At a late meeting of our club we had a lively discussion on cattle feeding. It did not take the form of a regular debate; each member had a prepared speech in which he related his personal experience. The methods and opinions differed so widely that confusion arose, when Mr. Harris, an extensive feeder, pulled a pamphlet out of his pocket and commenced reading. It was the results of the feeding experiments conducted at the Model Farm last winter. This made the confusion more confounded. One member reminded the president that it was against the by-laws of the society to introduce politics into the discussions. The president ruled that the reader might proceed until stronger evidence of politics was evinced, but Mr. Harris had not gone further than to observe that the experiments must be scientifically correct, for they corresponded with the "nutritive ratio," when the confusion broke out more vehemently than ever. On being questioned, Mr. Harris could not explain what "nutritive ratio" meant, neither could any member present. Seeing that party feelings were so bitterly aroused, I said nothing. Finally it was resolved that a paper on the subject should be prepared for the next meeting, and as I was the only member independent in politics, I was the unanimous choice of the meeting.

Filled with a keen sense of my responsibility I brought a laboriously prepared paper to the next meeting, and the members kept commendably silent while I was reading. My entire paper is too long for publication, but the following are the salient points:

The main branch of science which has been investigating this subject is chemistry. From time immemorial ordinary experience has taught every practical feeder that some foods were more nutritious than others, but it was not until food stuffs were repeatedly analyzed by the chemist that their exact feeding value was ascertained. Not only were they analyzed, but they were fed to cattle for the purpose of finding out what percentage of them was digestible. Not the foods alone, but also the excrements, solid and liquid, and even the animal itself was weighed and analyzed. During the past quarter of a century many thousands of domestic animals were thus experimented upon, and the truths of many important points so firmly established that they can no longer be questioned. These tests, conducted in these practical ways, have founded the science of cattle feeding.

In analyzing foods, chemists have found four distinct constituents, viz., (1) albuminoids, being compounds of nitrogen, which form muscle and nerve tissue, and therefore they are called flesh formers; (2) carbo-hydrates, being compounds of carbon and the elements of water, such as starch, sugar, fibre, &c.; (3) fats, containing the same elements as the carbo-hydrates, but they do not exist in the same proportions; these two compounds produce fat and heat and are called fat producers; (4) minerals or ash, which form bone and also enter into the blood and the muscular tissue; they are called ash because they are reduced to ashes on combustion of the food, and called minerals because they are the mineral or inorganic part of the plant, to distinguish them from the organic

part. Although they are indispensable to life, chemists do not take them into account because they are never deficient in a mixed ration, nor do they exist in excess. It has also been ascertained that the fats of the food have $2\frac{1}{2}$ times more heating power than the carbo-hydrates, so that by multiplying the former by $2\frac{1}{2}$ we get their equivalent of the latter. This resolves the plant or the food into two classes, viz., the flesh and the fat formers and the proportion which the former bears to the latter is called the nutritive ratio, or more correctly, the albuminoid ratio. Take the analysis of oats for an illustration, viz., water, 14.3 per cent.; albuminoids, 9 per cent.; carbo-hydrates, 43.3 per cent.; fat, 4.7 per cent. Now if we multiply the fat by $2\frac{1}{2}$ and add the product to the carbo-hydrates, we get 55; so that the nutritive ratio will be 9:55, or say 1:6, meaning that oats have six times more fat and heat forming than flesh forming constituents. It must be remembered that the percentages given above mean the digestible portions of the oats. It has further been ascertained by German investigators that a combination of foods which has a nutritive ratio of about 1:6 is the best fattening ration. It will now be seen that it is absurd to speak of hay, peas, corn, etc., producing good or bad results without first ascertaining the combinations in which they are fed, and when these are known the results can usually be calculated without experimenting. It is a question of flesh-formers and fat-producers, not of peas, oats, roots, etc. Any food may be mixed with a ration so as to produce the best or the worst results at the will of the feeder.

The only object an experimenter can now have is to find out the best nutritive ratio for his breed and conditions, and this is the aim of every experimenter in the world except at the Model Farm. In the table of results read by Mr. Harris the nutritive ratios ranged between 1:3 $\frac{1}{2}$ and 1:4 $\frac{1}{2}$, the former figures being represented by the peas and the latter by the barley ration; and the cost of putting on a pound of flesh with the peas mixture is 11 $\frac{1}{2}$ cents, producing a daily increase of 1.6 lbs., while with the barley ration the daily increase was 1.9 lbs., at a cost of only 10 cents, proving that the higher and consequently the more expensive the ratio, the lower were the results.

Let us now compare the costs of these results with those of other investigators. Taking the U. S. standard of 4.5 cents per lb. as the price of digestible albuminoids, 0.95 cents for the carbo-hydrates, and 3.84 cents for the fats, we get 30 cents per day as the cost of the peas ration; but as this is one-third higher than our average market prices, these figures may be reduced one-third, so as to make the said standard correspond to the actual cost of the ration. It will now be seen that the peas ration costs 20 cents a day and produced only 1.6 lbs. gain, while the barley ration costs scarcely 17 cents a day and produced a daily gain of 1.9 lbs., proving that the higher and consequently the more expensive the ratio, the inferior are the results. This same principle is borne out by twenty calculations which I made on other experiments conducted on the Model Farm.

Prof. Sanborn, of the Missouri Experiment Station, after conducting accurate experiments for six years, found that the ratio of about 1:10

for steers of the same weight as those fed on the peas and barley rations at the Model Farm, (about 1160 lbs.), and costing not more than 13 cents a day, produced the best results. No attempt has been made at the Model Farm to find out the best ratio for our breeds and conditions, and therefore the experiments are not only worthless but misleading. It is not an experiment station so far as cattle feeding is concerned. The experiments have no scientific value because they are conducted on no system or from no principle, and they have no practical value, because no farmer, except perhaps those who stuff their animals for prizes, feeds such high and expensive ratios.

The object aimed at by the Model Farm experiments can never be attained, and unless farmers unite and discuss such questions on their merits, and not from political standpoints, they will be humbugged by scientific technicalities all their days, and will be taxed for government enterprises purporting to be for their interests, when in reality they are nothing but a delusion and a snare.

PRIZE ESSAY.**The Best Methods of Encouraging Tree Planting on Farms.**

BY P. E. BECKE, OTTAWA.

The subject of tree planting has been so often discussed, and it is feared with such little practical value, that it is with some diffidence the matter in question is now touched upon; but as the FARMER'S ADVOCATE puts the matter in a new light and from a different standpoint, it is as well to enquire why such poor results have hitherto been obtained with regard to tree planting amongst our agriculturists.

When elderly men now living were boys, in most parts of Canada trees were a greater nuisance than the Canada thistle or any other noxious weed is to-day. The main object of the "settler" of former years was to study how quickest to get rid of our noble forests, root and branch; much more money was then spent on their destruction than the cost of the soil on which they stood.

Farmers and others are only now beginning to awaken to the fact that this wholesale timber slaughter has gone too far, and it is feared it will only be when the wood famine seriously sets in, that people will begin to realize the serious mistake which has been made, and apply themselves to planting with the view of reclothing at least such portions of the country as are practically unsuited for cultivation, as well as road-sides for ornament, or wood lots for fuel, and economic purposes.

All things terrestrial appear to have their ebb and flow, like the tides. After many years of tree destruction, there will as surely come another period of tree production. The keen man of business watches these waves in trade and when he sees every one rushing into one particular line, he knows the market will decline; he, therefore, prudently makes his book so as to catch the upward boom in another direction. The production of timber cannot be accomplished in a day, and it will be well for those who have ground unsuited to the production of grain, and producing only indifferent pasturage, such as hill-sides or land filled with boulders, so that it would cost more to clean it up than it is worth, to consider well whether

it would not be advantageous to plant it with maples for the production of fuel or sugar; black walnut for the purpose of timber or nuts; Catalpa or some fast growing tree for posts or railway ties; basswood or poplar for paper making; or in fact any tree that will grow on the peculiar soil to be planted, or that which is most suited for the adjacent market.

At the recent meeting of the Fruit and Forestry Association at Barrie, it was stated that maples planted from ten to fifteen years were of sufficient size to tap, that the three quarter inch auger and the iron spile now used would not injure the tree or retard its growth, that maple sugar and syrup were advancing in price, so that the saccharine products from a maple bush would pay good interest on the investment, as its products were becoming more scarce and expensive every year.

It may be stated in the outset it is useless setting trees for profit unless the land is so fenced that cattle can be kept out of the plantation. A two wire fence will accomplish this object, and it is recommended that Lombardy poplars, or some other variety of quick growing trees, be set from six to eight feet apart around the park lot, so that in a few years the wires required for protection may be attached to them; by this means a permanent inexpensive fence may be secured, and damage to the growing bush prevented. A farmer of considerable experience assured the writer that he has five acres of wood which supplied him with firing for some years past. I asked him if it was not diminishing; he said, on the contrary, it was rather on the increase, but he added, "we never let the cattle into it."

The farmer is a practical individual, and if it can be proved to him there is money in anything he will probably try and get it out. There is not much money in ornamental planting, or in shade trees, but even these have their value. A law should be enacted, or a clause inserted, in the cruelty to animals act, imposing a fine on any one keeping horses or cattle in a field not suitably provided with shade trees. It is almost as barbarous to keep cattle standing in the hot summer's sun all day, and does them nearly as much harm, as if they were kept without water. Again, farms planted along the roadside with avenues of handsome trees, are more eagerly sought after by intending purchasers, especially from the old world, than those which are barren of nature's noblest specimens of vegetation. I have before me a letter from a gentleman in India, who asks me where he can purchase a farm in Canada. Amongst the stipulations are: "We must have trees and water, after living in these fearful Indian plains."

Perhaps in years to come, cupidity will do for our country what a refined taste for the beautiful, which appears to be lacking to a large extent amongst the rural classes, has so far failed to do; and when it is found that more money can be gained by a judicious arrangement of forest and ornamental trees, such planting will take place, and tree shelters and road-side avenues will be the rule instead of the exception, as at present.

When you wish to reform a Tartar, it is said you must "catch him young." Perhaps this simple piece of advice might be usefully applied in the present instance by inaugurating

tree-planting in our public school yards. It is understood this plan has been attempted with a fair amount of success in some places in the United States. In order to carry out the scheme proposed, a piece of ground should be set apart in the school enclosure for the purpose of planting trees, and every boy should be induced to plant a seedling of some kind on his entrance into the school, or when he is of such an age as to be able to comprehend what he is doing; this tree he must take care of in his play hours, and on finally leaving the educational establishment he should be permitted to carry away with him his tree, whilst the boy who takes his seat would fill the gap thus made by planting another in its place. In this way an interest would be established and the seed for future operations sown.

Many of our school grounds are, unfortunately, too small for even this modest piece of arboriculture; at the same time, it must be borne in mind that a very small space will be required, if the seedling tree is pulled from the woods with the hand at six inches in height, and grows from seven to nine years (the boy entering school say at five and leaving at twelve to fourteen years old), at the end of which time the tree will be from ten to fifteen feet high, and an inch and a half to two inches thick at the base. The boy who has watched his tree growing and tended it for so many years will naturally become interested in it, and will have conceived some idea as to the time it takes to grow a tree from seed.

The actual lesson thus practically taught will never be effaced from the boy's memory, especially when he has the living example in the shape of his own sapling constantly before him; as no doubt when he has cared for his tree so long, on carrying it away with him he will plant it in some place secure from destruction by cattle or otherwise.

The Dairy.

Effect of Cold on Cows.

BY PROF. L. B. ARNOLD.

Dr. Nichols, of the Boston Journal of Chemistry, found that the cooling of his cows' legs by standing in a pool of cool water in hot days in the summer to avoid the annoyance of flies, diminished their flow of milk. His observations were carefully and repeatedly made, and there could be no mistaking the fact that the chilling of their feet and legs decreased their milk secretions, so sensitive are cows to the influence of cold. Such being the case, what must be the effect upon cows which, at this time of the year, have not only their feet and legs, but their whole bodies, not only moderately, but severely chilled, by standing out in the cold winds and storms needlessly all day, or have their legs, teats and ears and tails nearly frozen by standing still too long in a cold stable? The observations of the learned and close observing doctor are worth remembering by every dairyman in these high latitudes, as a warning against exposures to the inclemencies of the seasons. How many dairymen have any clear appreciation of just how much chilling a cow will bear before her milk will begin to shrink or her flesh begin to give way? Not many, it is pretty certain, or we

should not so often see cows on the leeward side of fences with their backs humped up and their heads and tails drawn down, and their feet all gathered upon a single square foot of surface, with the vain endeavor to ward off some of the intensity of the chilling blasts that distress them. If the owners of cows or other stock fully appreciated the extent of loss they endure by allowing their animals to get chilled to discomfort nearly every day all winter, they certainly would take better care of them. No man in his right mind would stand by idly and see the flesh of his animals gradually but steadily wasting, without making a strenuous effort to arrest the waste. He certainly would exert himself if he positively knew that either flesh or milk was being lost, and would cost four or five times as much to restore it again as it would cost for lumber to save it by making comfortable quarters. Everybody is not expected to make as close observations as Dr. Nichols, but it would seem as if anybody ought to be able to distinguish between the amount of flesh on a cow's bones in the fall and the quantity which is on them in the spring following a hard winter; and if he has fed his animal decently well, he ought to be able to understand that the difference in flesh between fall and winter is due to destruction by cold. The reader may think a man must be stupid if he could not "see it," but there are thousands of men in every State and Province, the flesh of whose cows comes and goes alternately every summer and winter, and yet the owners "don't see it." It would seem as if men who are so terribly stupid as not to know enough to take care of their own property when the loss is so plain, ought not to be invested with the right of suffrage to tamper by their votes with the property of those who have sense enough to take care of it, and that the man who could wake up the stock owners of a State, or even of a township, to a realizing sense of the losses they annually incur from needlessly exposing their stock to cold, or to cold which could be easily avoided, should be entitled to a pension the rest of his life. Such a man would certainly deserve well of his country.

Prof. L. B. Arnold says a dairy farm costs ten per cent. less to operate than grain growing or mixed agriculture; second, the mean returns average a little more than other branches; third, prices are nearer uniform and more reliable; fourth, dairying exhausts the soil less; fifth, it is more secure against changes in the season, since the dairyman does not suffer so much from the wet and frost and varying seasons, and he can, if prudent, provide against drought.

The bogus butter men in New York are coming to grief. The dairy commissioners have commenced a series of prosecutions against the vendors of the vile stuff, and are resolved not to relax until oleo. is gone. It is said that oleomargarine and butterine are sold to the retail dealers at 13 to 15 cents a pound, and retailed as butter at 20 to 25 cents. The retailers are attempting to evade the prosecutors by peddling direct to the customers without passing the goods through their shops.

The length of working hours for farm laborers is established by custom, not by law.

Stock.

Standard Points of Milkers.

HEAD.—Medium length; cheeks small, fine and clean; forehead broad between eyes and slightly dished; muzzle fine but distinctly marked; nostrils large, indicating great breathing power, and hence a vigorous constitution..6

EYES.—Large, bright, prominent and mild, surrounded by a circle of orange-colored skin. The eye is the index to the disposition, and a gentle, giving, motherly cow is almost invariably a good performer.....5

HORNS.—Small or medium; oval preferable to round, but direction unimportant; color yellowish-waxy.....2

EARS.—Medium size and fine, covered with fine hair; look for orange-colored skin inside.....2

NECK.—Fine, slender, rather long, and concave superiorly; attachments to head and shoulders should be neat and strong.....4

CHEST.—Moderately deep, but not wide or full. Line from lower point of brisket to top of shoulder should form the edge of a wedge of which the greatest diameter through the posterior portion of the barrel is the base.....4

BACK.—Peak of shoulder should be elevated and somewhat pointed. Many good milkers have straight backs, and some have tail attachment higher than line of back. The advantage of a slight droop towards tail attachment is that it gives strength to the loin, and this is an important point in the heavy milker, although it may not effect the milking properties. In the accompanying illustration our artist exaggerated the droop..3

CROPS.—Full, so that arms will appear to be well under body; but room for arm play is required. Girth here indicates large organs, as well as a good constitution, which is the mainspring of a heavy milker..10

BARREL.—Large, round, capacious; ribs well sprung out from backbone. Barrel should gradually and gracefully increase in girth back to hook bones, and should wedge both laterally and inferiorly; may also wedge superiorly, as shown in the illustration.....10

LOIN.—Broad and slightly arched. Here great strength is required to support weight, especially when in young. Three factors enter into strength of loin, viz., (1) droop towards tail attachment, (2) arched transversely, and (3) distance between posterior rib and hook bone not too great. Hooks should project prominently, but should not be large or coarse.....6

FLANK.—Should extend well down, covering as much of udder as possible, but should not be thick.....2

PIN BONES.—Fine, prominent, and wide apart.....3

HIPS.—Width between hips required to make plenty room from udder; here the muscle should be developed exteriorly.....3

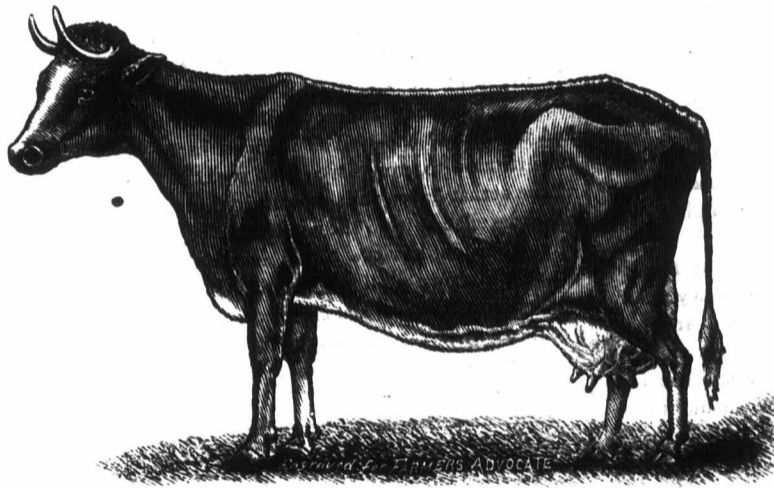
UDDER.—Should be well tucked up behind;

large, but not fleshy; should be braced well forward; teats should point outward in every direction—the fore ones anteriorly and laterally, and the hind ones posteriorly and laterally—and should be of convenient size for milking when the pressure is exerted by all the fingers; skin on udder should be thin and of fine texture, soft, silky and exuding an oily secretion; color, dark orange; hair fine, short and soft; milk veins prominent, winding, knotty-like, with entrance into barrel distinctly marked.....16

ESUTCHEON.—Distinctly marked, wide, covering a large area of posterior portion of udder, and extending as high up between hips as possible.....3

HIDE.—Medium thickness, fine texture, loose, soft, pliable, mellow, covered with a yellowish dandruff, and with fine, soft, dense, velvety hair.....9

TAIL.—Rather long—two or three inches below hock, slim, tapering into a large, heavy switch; attachment strong, point sharp and covered with dark yellowish skin.....2



FRAME.—Large, but compactly set together; bone of fine texture, but strong; legs short, bones below knees and hocks, flat.....10

Building up a Dairy Herd.

Milkers have standard points as well as beefers, by close observation of which the best milch cow in any herd can be readily picked out. It is true that some cows defy all points, but they are rarities, and if the amateur judge first confines his attention to the standards, he will seldom fail to make a good selection. The average farmer who contemplates building up a good dairy herd will use the native cow as a basis, whether or not he commences operations with a native or a thoroughbred bull. Before considering the points, there are two important items which cannot be evaded, viz., (1) Breeding for milk alone, including quantity and quality of milk, and (2) Breeding also with a tendency to put on flesh during or after the period of dairy usefulness.

If there is any virtue in the beef-milk mode of breeding, it is under a hap-hazard system of dairying and beefing, and the best authorities now agree that in breeding an exclusively dairy herd, the beefing properties must be regarded as antagonistic to the object sought.

Prematurity and longevity do not harmonize in the same animal. The dairyman requires length of use, and if the cow carries an unnecessary weight of fat for a number of years, it is sunk capital which should have been early converted into dairy products, besides a loss of the food required to support this extra weight. The idea that a cow can be bred to have an aptitude to fatten after her usefulness for the dairy is gone, is erroneous; for the longer she is kept in a lean condition, the greater is the tendency to resist the production of fat, and this resisting quality increases in the offspring with each generation. Besides, if fat can then be produced, it is done at a heavy loss. It is true that an old cow cannot produce milk as cheaply as a younger one; but the aim should be to extend the profitable period as long as possible. The practice of milking for a few years and then slaughtering for beef at the age of six or seven is objectionable, for it can never pay to raise a beef-milk cow for the meagre dairy profits of three or four years, and then put on flesh at a profitless expense.

The standard points for judging cows noted for the quantity of their milk are quite distinct from the indications of quality milkers. So long as the existing system of associated cheese making exists, no farmer will be justified in breeding for anything but quantity of milk; but if he wishes to establish a private dairy, where the quality may have some effect in establishing his reputation in the cheese markets, the case is different. In building up a butter herd, breed in such a manner, with regard to quantity and quality, as will produce the greatest quantity, not the greatest percentage, of cream.

In all cases of breeding, however, the main object is to get a cow with a strong digestive apparatus, and able to consume large quantities of food. The food assimilated must produce something; and the aim of the dairyman should be to take the precaution that this something is milk.

All other things being equal, a large cow is more profitable than a small one; but a light cow may be the equivalent of a heavy steer. A cow is a machine in more than one sense; that is, she not only requires food to keep up heat and motion, but every muscle and every bone is built on mechanical principles, and the breeder will never attain the height of success until he so adjusts the parts that each will be proportionate to the work it has to perform.

In building up a herd management is as important as breeding. Good selection with bad management may keep the herd stationary; so may bad selection with good management. Any farmer who makes up his mind to weed out his worst cow every year, and substitute one as good as his best, will be amazed at his progress in a few years; in doing so he should not haggle over a difference of \$15 or \$20 in the price of a good cow.

A cow with all the standard points complete cannot be had; but the aim should be to get as many good points as possible. In judging

steers the price of the butcher's cuts may be taken as a valuable guide ; but in judging cows the same purpose may be served by attaching relative numbers to the different points according to their respective values. This we have done in the standard points given herewith, the total being 100, so that in purchasing cows for the purpose of improving or building up a herd, the breeder will be able to select those possessing the greatest number of the most valuable points. Some latitude must be allowed in establishing these relative numbers, giving greater preference to the effect than to the cause. For example, if a milker has great digestive powers, it must follow that she has a capacious udder and large milk veins, and whatever other effects that result from the cause. Indeed, the whole machine is made up of cause and effect. The points may also be divided into two classifications, viz., (1) those indicating quantity of milk, and (2) those indicating quality, and the relative numbers may be adjusted according to the object sought—butter or cheese. The quality is indicated by the color of the skin, which is best observed on the escutcheon, in the ears, around the eyes, on the nose, etc., the peculiar dark-orange tinge on these spots being readily recognized, as well as the waxy appearance of the horns and hoofs.

The Coming Cow.

At the recent Islington show, held under the auspices of the British Dairy Farmers' Association, and representing the cattle, cheese, and butter interests of the whole United Kingdom, the little Kerry cow carried off two of the most important first prizes, having competed against Jerseys, Ayrshires, Holsteins and Shorthorns. This Irish breed is of small size, but compact in form, and has long been celebrated for superior milking properties, regarding both quantity and quality, as well as flavor.

Now look out for a Kerry boom. It is a notorious incident that live stock grabbers in their scourings over the face of the earth in quest of boom material, have escaped the Kerry mountains. Our farmers who are in favor of infusing a squirt of aristocratic blood into the veins of their "scrubs" should have patience for a few years until the Canadian cow eclipses the Kerry, and then the fabulous prices will remain in the pockets of the farmer instead of being squeezed out into the pockets of the speculator.

At the Islington show the Rev. Canon Bajo paid the following compliments to the Kerry cow: "It is a remarkable fact that with all the talk we hear of high-bred stock, of Guernseys and Jerseys, that a little animal called the Kerry cow has been to-day in your show yard the producer of the finest butter. Now if that be so there is something good in Irish cattle of which I feel pride as an Irishman. It is an exclusively Irish-bred animal that is able to produce against England the finest class of butter. I am connected with a company, in the finest land, I believe, in the world, called the Golden Valley, but we have been often beaten by the farmers from Kerry mountains."

PROFESSOR—(To one of his students): What is the average percentage of cream in milk?

STUDENT—Do you mean during the strawberry season, sir?

Grooming and Blanketing.

These being questions in which the health of the animal is greatly involved, should be carefully considered at this season of the year. Some farmers object to much grooming under the supposition that the dirt on the skin keeps out the cold, or keeps in the heat, as the case may be. The reverse of this is the case, however. Dirt radiates heat from the body, arrests the gaseous exhalations and distributes the temperature unequally over the different parts of the body. Cleanliness, induced by grooming, stimulates cutaneous circulation, and this is the true defensive weapon against atmospheric inclemency. If the whole surface of the body is kept clean, the temperature and the circulation become equalized, perspiration is free, the skin less vulnerable, the work of the other excretory organs is lightened, and the health of the animal promoted. Grooming is to our domestic animals what bathing and washing are to man.

Grooming may be done right and it may be done wrong. It is an obnoxious practice to raise a dust in the stall, especially when the animal is eating. If there is much hair and dust to fly, let the work be performed outside. The animal should not be irritated or tormented with the comb; if the skin is tender, the rubbing should be gentle until it toughens. Cattle may be groomed with great advantage to the animals, and consequently also to the owner; they will thrive much better, generate less lice, and lie down more comfortably. The currycomb is food.

With regard to blanketing farm horses, false physiological notions prevail amongst many farmers. If the stable is reasonably comfortable, no blanket should be used; but every farmer should be scrupulously attentive in applying a covering when the horse is in a state of perspiration, in or out of the stable. The strongest objection to the blanket is that it disturbs the natural equilibrium of temperature, arresting the emanations from the upper surface of the body. If the covering could be equally distributed over the whole surface of the body and limbs, the practice would not be so objectionable. The blanketed horse is a tender animal, and there is no use in ministering to his comforts in the stable, if he is to suffer therefrom in the performance of his duties. Horses accustomed to blankets would be injured by being suddenly deprived of them.

The Moncton (N. B.) Transcript, a paper which takes a great interest in the stock farm which the New Brunswick Government is about to establish in that Province, in criticising the action of the politicians and the party animosities that have been aroused in the contemplated change of the location of the farm from Kings to York county, has come to the conclusion that the most the Government should do in the interests of all concerned is to aid and encourage private enterprise.

Farmers who are in the habit of feeding scanty rations to their stock will have observed that they usually lose more flesh before New Year than during all the rest of the winter months. It takes some time for an animal to become accustomed to changes of circumstances, especially amidst sudden extremes of temperature, food and other conditions. Stock well managed during the first two or three months of winter, will require little attention afterwards.

Garden and Orchard.

Raising Small Fruits.

Most farmers regard small fruits as a luxury, and not as a necessary article of diet, and are therefore either prejudiced against their use altogether, or postpone their cultivation until they can afford to indulge in luxuries generally. The Fruit Growers' Association is doing excellent service in testing the different varieties and disseminating useful and accurate information. Very few farmers go into small fruit growing for the sake of profit, but more would engage in it on a small scale for family use if they were convinced that fruits were a necessary article of diet, as well as a wholesome luxury. By commencing in this way, it would soon expand into a regular branch of their business. Our fruit growers are attempting to awaken a livelier interest in fruit growing by advocating the introduction of botany into our public schools. This is a step in the right direction, but we fear that it will be as barren of results as the introduction of agriculture has been. The Association means systematic or structural botany, which would not have the desired effect. A knowledge of the names of plants or of their different parts, or even a knowledge of their cultivation, would be but a weak stimulus; consumption must be stimulated as well as production, and this can be most successfully achieved by a knowledge of physiological botany, including the analyses and nutritive properties of the different articles of diet. Teach the consumer that fruits are a succulent food, that they are useful for the saline or mineral matters they contain, which are usually deficient in other foods, that the acids are as wholesome as they are delicious, and frequently also medicinal in their effects; then teach the nature and action of succulent foods, the necessity for the plentiful supply of the salts of plants, the action of the acids, etc. An elementary knowledge of these facts would stimulate consumption, consumption would stimulate production, and production would create a thirst for a knowledge of the best and most profitable varieties. The introduction of agriculture into schools has proved a failure because the authorized text book does not contain the first principles; so it may be with botany.

Fruit growing as a business may be said to belong to a higher order of farming than most of the other branches. We mean that it demands greater intelligence. In order to attain the maximum of success, a comprehension of the principles of agriculture is just as necessary to the farmer as the principles of any other profession to those engaged in it; but the impression we wish to convey is that while a minimum of success can be attained in some branches of farming by brute force, fruit growing demands more brain than muscle. Hence we find amongst fruit growers an insatiable thirst for knowledge, and they have found that the most effectual way of acquiring it is by experimenting and organizing.

Every farmer possesses special facilities for the cultivation of small fruits. He requires no extra tools or implements; he can raise all the manure he requires; he has a wide scope on his farm for the selection of such soils and aspects

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as will be most suitable for the different kinds of fruits, and he can rotate or change locations whenever destructive insects or other causes render it desirable. Few of these advantages are possessed by the specialist. As soon as the farmer is successful in raising a few of the different varieties of each kind of fruit for family use, he is in the best possible position to engage more extensively in the business, and raise fruits for the markets. It has been said in objection to fruit growing that it interferes with other work on the farm. This is partially so; but it must be remembered that the amount of manual labor is but a small item in the account compared with the mental effort expended in planning, opening markets, etc., which can be attended to during the winter months.

Perhaps one of the greatest advantages to be derived from the raising of fruits is that it will have the tendency of keeping the boys on the farm—especially the bright ones. Any boy who has a thirst for knowledge or an aptitude for business, can find full scope for his qualifications. Not only so, but his enterprise and his methods will shed their influence on the slower boys of the farm. The whole farm may be turned into a partnership affair, the one department keeping accounts with the other. The arrangement would be of special advantage if a dairying department could be added to the partnership. Let one of the boys make the building up of a dairy herd and the manufacture of first class dairy products his whole study; let another devote his attention to agriculture, and another to fruit growing, and the partnership will then be complete. The dairyman will need agricultural products from the farmer, and the fruit and farm partners will require manure, etc., from the dairy partner, and so on around the whole circle. This plan would also be a means of keeping the girls at home, instead of being driven to service, as in fruit growing and dairying there is found congenial employment for females of an intellectual cast of mind. In this way 100 acres would furnish ample employment for a large family, and the profits would be greater than those from 300 or 400 acres worked separately on the existing system, for in the latter case the gains are based almost entirely upon the physical strength of the farmer, while in the former both brain and muscle are invested. A partnership of this kind once firmly established would tend to rouse the latent faculties and bring out the highest agricultural resources of a whole county.

The Late Forestry Exhibition.

At the late International Forestry Exhibition held in Edinburgh, some interesting facts and figures were elicited. The assembly consisted of the ablest foresters of the day, and their views are worthy of being held in remembrance. It was stated that the world, without forests, would be uninhabitable. They maintained a balance of warmth and moisture, protecting the soil from the sun's rays and the cold's blasts. Wood, not gold, was the true basis of national wealth. War, pestilence, storms, fanaticism, and intemperance, together with all the other mistakes and misfortunes had not caused half as much permanent damage as this fatal crime against the fertility of

mother earth. The great table land of Central Asia—the cradle of our race—was, in historic times, as fertile as a garden, and produced food for the support of great and populous nations. The reckless destruction of the forests had converted the great plains and valleys of these parts into dreary deserts, which afford sustenance to only a few scattered tribes of nomads. Here no water was to be met with, and the adjacent country was scourged by flocks of sheep and goats in search of the scanty shoots of vegetation. The Ettrick Forest, the Highland Glen and expanses of Australian bush had been ruined by allowing sheep to pasture freely on their young growths, making the climate arid and causing the water-courses to dry up. The same suicidal operations had caused the awful famines of India and China. Syria, Mesopotamia, Asia Minor, Greece, Turkey, Northern Africa, had in former times not only supported teeming millions within their borders, but also populations of other and distant lands. The denudation of their forests by conquering hordes resulted first in decreased fertility, then in sterility, and lastly in bare desert.

It was the cutting down of the forests in the Juras, the Vincennes, in the Pyrennees, in the Carpathians, and in the Appenines, which caused the disastrous floods that ever and anon devastated Southern France, Hungary, and Italy. The French government, in order to check these floods, spent vast sums in replanting the mountains first named; the Austrian government had its attention recently drawn to the necessity of re-foresting the slopes of the Carpathians; and the Italians were alive to the securing of immunity from their ever-recurring floods.

The backward condition of the agriculture of Scotland and the low social state of its people during the three centuries which preceded the Union, might be traced to the devastation of the woods and forests, which occurred about the time of the Wars of Independence. Improvement in local climate and methods of husbandry might be attributed in many parts of Scotland to judicious planting. Take, for instance, the Upper Ward of Sanaskshire. A hundred years ago the district was bleak, visited by early frosts in autumn and late frosts in spring. Even oats would hardly ripen on the slopes of the hills, and potatoes were too frequently killed by the cold mists which collected in the valleys. But when the hills were covered with woods, or checkered with belts of plantations, chilly fogs ceased to gather in the hollows, the full sweep of the winds was broken, the trees equalized the temperature, the genial sun opened the sheltered crops and the climate of the district was thoroughly meliorated. A similar change had been effected in many of the higher districts of Stirling, Perth, and Aberdeen.

SIR.—I have been a subscriber to your journal since 1883, and consider your interest to be the interest of every farmer and stock raiser in the Dominion of Canada, as they must and will receive the benefit of your success in the way of receiving more light on the subject of farming, its various methods, and the best means of making it a financial success. I trust the circulation of your journal will increase, and that the year 1885 will prove a prosperous one for you.
SUBSCRIBER.
NEW GLASGOW, N. S.

Correspondence.

NOTICE TO CORRESPONDENTS.—1. Please write on one side of the paper only. 2. Give full name, Post-Office and Province, not necessarily for publication, but as guarantee of good faith and to enable us to answer by mail when, for any reason, that course seems desirable. If an answer is specially requested by mail, a stamp must be enclosed. Unless of general interest, no questions will be answered through the ADVOCATE, as our space is very limited. 3. Do not expect anonymous communications to be noticed. 4. Matter for publication should be marked "Printers' MS." on the cover, the ends being open, in which case the postage will only be 1c. per 4 ounces. 5. Non-subscribers should not expect their communications to be noticed. 6. No questions will be answered except those pertaining purely to agriculture or agricultural matters.

Voluntary correspondence containing useful and seasonable information solicited, and if suitable, will be liberally paid for. No notice taken of anonymous correspondence. We do not return rejected communications.

We do not hold ourselves responsible for the views of correspondents.

SIR.—We are agitating here for the erection of a cheese factory. Can you inform me as to the probable cost of machinery of every kind necessary to run a factory supplied by say 300 cows, and the size and nature of buildings necessary?
J. R. B.
NELSON, MANITOBA.

[The building for manufacturing should be 30 x 60, with a 10 foot ceiling; a currying house 30 x 40, with a 12 foot ceiling, and well ventilated. For manufacturing the milk of 300 cows, you would require two 500 gallon vats, \$75 each; one curd sink, \$45; 15 presses at \$10; one curd grinder, \$20; curd knife, siphon, weigh can, milk conductor, and scales, \$45; one eight horse power engine and boiler, \$400. The buildings described would cost about \$1,200. The currying house should be at least 20 feet from the make house, with run way between. These are the prices in this Province; whatever percentage your materials are higher than ours, you can easily add on.]

SIR.—Will you be so good as to give me some information as to the organizing and work of a cheese board? We have eight factories in this township and as many on either side as depending on chance sales. We have tried shipping to Montreal, but the expense, commission, etc., cut down the price. I see you get better prices up west.
OSNABURCK, ONT.
DARBYMAN.

[In regard to your organizing a cheese fair in your township, we would advise you to call a few of your friends together, establish a fair, elect a president and a secretary, and appoint a place to hold your fair, advertise it, and buyers will attend. As regards your board of directors to conduct a factory, the law requires at least three, and not more than nine, before you can organize, the names of whom must be forwarded to the government with application for your charter. You had better go to a lawyer and he will write a charter for you.]

SIR.—We pick our apples by hand in half-bushel baskets, trying as far as possible to avoid empty in from one basket to another in the orchard. We have quite a number of baskets, and when all are full we draw them to the barn and empty carefully on chaff or straw, where they are left to sweat until there is a danger of freezing. Then we take these boxes, (which can be procured from any factory for 12 1/2 cents a piece) and after putting a number on box and corresponding one on cover, we carefully sort and place in boxes and label the different kinds. After leaving a few days, we take them to the cellar. This plan has the advantage of any other we have ever tried in several respects. It is practically putting the fruit away airtight. It economizes room, as the boxes can be packed one on the other to any desired height. You can at once pick out any kind or quality, if properly labeled, that you want. They save far better than in barrels or boxes where a quantity are together. We had good sound snow apples in May, this year, and greenings after strawberries were ripe. The numbers on box and cover are necessary, as they will not always fit if interchanged. The boxes will last for years if properly taken care of.
C. E. S.
VICTORIA, ONT.

SIR.—I was much interested in the article on "Beef and Butter in one Cow," by Prof. Arnold, but it seems to me that the Professor has omitted one important item from his calculations, viz. the calves. During the six years covered by his estimate, these cows would each bear six calves. We know that if served by a good Short-horn bull, those of the Short-horn grade would all be valuable for beef. What about the Jersey grades? If by a Jersey bull, the female portion of them would be valuable for milkers, while the males would be almost, if not altogether, valueless for any purpose. Has Prof. Arnold, or any of your readers, any experience as to what the result is when a Jersey grade cow is served by a beef-producing male?
PETERBORO, ONT.
J. C.

[Answer by Prof. Arnold:—No estimate was made of the calves because they were supposed not to be raised in either case. The crossing of a beef-producing animal with a Jersey grade develops an off-spring inferior to the sire for beef and inferior to the dam for milk, but using a Shorthorn bull of a milking strain with Jersey grades, or better still, with full blood Jersey cows, develops in the female offspring size, constitution, and quantity of milk above the same in the dam, while the Jersey blood stamps the milk with its peculiar richness, making a highly valuable class of cows. The most profitable butter cows I have ever met with have been of this class, and the calves from such a coupling seldom fail to produce superior butter cows.]

Sir,—“Taxing Scrubs” is the caption of an extremely amusing, and at the same time somewhat edifying article in the November No. of the *Advocate*, p. 328. In that article the writer expresses some that is wise as well as much that is otherwise. Indeed, upon the whole, he furnishes much food for thought and calls loudly for a more thorough ventilation of this oft suggested question, How best to dispense most quickly and cheaply with that, to many intelligent men, intolerable nuisance, the “scrub bull?” Mr. Marshfield enunciates one of the soundest, and at the same time one of the most generally recognized principles known to the breeding fraternity, when he says that by skillful selection and management we can rapidly and cheaply improve our herds, and that our kind yields susceptibility to generous treatment. But is Mr. M. aware that skillful selection is often largely based upon pedigree as well as individual merit, and that skillful selection is exactly what the stock raiser’s organ is contending for when pleading for pedigreed stock as sires? Were Mr. Marshfield looking for a “scrub” with which to improve his herd, would he not inquire diligently as to the performances of that bull’s ancestors in the dairy? Would he not ask, Were his dam and grand dam deep and rich milkers? Was his sire of a milk and butter strain? Would he not be the most scrupulously exacting, while making his “skillful selection,” in these particulars? But are not these facts, when reduced to writing, what goes to make a pedigree and record? Yet because advanced thinkers advocate the careful recording of these facts, which are, in themselves, in themselves, an intelligent selection of an animal that will prove reasonably reliable for improvement, this same writer makes the naughty suggestion that a tax should be imposed upon the editor who dares venture to publish such ideas styling him as a “scrub editor,” and desires that such be weeded out because, forsooth, the toleration of their productions becomes a violation of Mr. M.’s conscience. Now, by the gentleman’s own showing, if “scrub editors” should for such reasons be weeded out, then by how much more ought scrub bulls be discarded, the toleration of which we get does equal a violence to other men’s consciences? But the most thoroughly absurd and ludicrous discovery yet made by Mr. M., and as he says, by many others also, is the astounding fact that a native cow will give as much milk when put to a scrub bull as when put to an imported one? Yet while we admit that the discovery is most marvelous, we ask has either the writer in the stock raiser’s organ or any other same man ever argued to the contrary? Has any reader of the *FARMER’S ADVOCATE* that invaluable auxiliary of light upon these vital questions, ever seen the idea set forth that a native cow having been sired to a pedigreed bull, would, in consequence of having been coupled with a pedigreed animal, give more milk after having dropped her calf, than if she had been impregnated by a scrub instead of a pedigreed bull? This idea, Mr. Marshfield, is entirely foreign to this discussion. The question raised by the organ above referred to, is this, Will a heifer calfsired by a scrub bull and out of a certain cow, prove as useful, or is there any reasonable likelihood of its proving as useful in the dairy as one sired by a thoroughbred Ayrshire or Dutch Friesian, and out of the same dam? If so, then what becomes of your doctrine of “skillful selection?” Are not these improved dairy breeds the result of ages of careful selections and rigid weeding? Of course if Mr. M. proposes to start or produce a totally new and distinct variety of breed of cattle called scrubs, I have not the slightest inclination to dictate to him as to the source from which he shall select his material. But, even then, if he expects to command public confidence and respect, he will carefully make a note of the breeding and quality of his scrubs. And will not this be doing exactly what he is objecting to, viz., keeping a record of the blood ingredients of the make up and performances of the ancestors of his herd, how each had distinguished herself at the pail and in the creamery, and how strongly and with what unvarying certainty each had reproduced or handed down, and even intensified these pleasing and useful attributes in her descendants until now they have become fixed characteristics? And hence, “breed” is what he would term them. Then would he not refer with pleasure, pride, and confidence, to his pedigrees and records to sustain his claims, and justify so too? Then where is the reason in his kicking so against others doing this very thing, and urging, even with the “crack of the taxation lash” upon slow goers to right about, and improve by using animals already known to be themselves improved? To all others, aside from Mr. M., we would say, select as discriminatingly as possible from among the most highly improved of the improved breeds, and then weed out carefully the offspring, because life itself is too short to admit of any other course proving a success. But does not Mr. M. really over-reach the bounds of propriety when he asserts that the “organ” dare not say which breed is to be substituted for “scrubs,” because this he says would be showing partiality to some particular breed? Pray, Mr. Marshfield, when you “skillfully select” a scrub as a specially desirable animal are you not then showing partiality to that particular animal? And what is there so very unreasonable about that? Then why abuse others for doing

exactly what you practice and advocate? How can you ever expect to command public confidence and respect by adopting such a course? Tell the writer in the stock raiser’s organ what you wish to produce and he will no doubt favor you with his views as to which breed you are to substitute for your “detuned scrubs.” Scrub means an anonymously produced animal foreign to any recognized breed, hence, to use such a one for a special purpose is just about as sensible as to plant apple seeds and look for the same kind of fruit from the young trees as that from which the seeds were taken. Would it not be infinitely more satisfactory and reliable to at once graft the young trees with cuttings from some known bearers of good fruit? Then why is it not just as reasonable and sensible, and infinitely more profitable, to graft your native cow with a bull of some breed known to be improved itself, always bearing in mind that the male represents half the herd? Mr. M. objects earnestly against anyone advocating a principle involving the taxation of poverty, ignorance, and negligence on the part of others; pray, sir, is not this course quite as reasonable and just as the converse of it is? Is it not a fact that thousands of acres are now held in Ontario in a wild state because the owners know that the moment they improve these lots that moment their taxes will go up? Do not hundreds live in rickety, slovenly, tumble-down old rookeries because they know that if they build good houses they will be taxed in proportion? Now where is the sense in thus paying indirectly a premium upon slothfulness and indolence, and at the same time levying a direct tax upon industry, enterprise and thrift? Will the gentleman please give us light upon this important question? Moreover, would it not be infinitely better to sweep forever from our land the cursed system of raising revenue by licensing the sale of intoxicating beverages and make up the deficiency caused hereby by levying a tax, by license, upon stallions, bulls, boars, and rams? The writer keeps from one to three pedigreed bulls each season and would cheerfully bow to such a system. Could Mr. M. compare the grades of this section with the scrubs, he would vote once for all for a pedigreed sire every time.

MIDDLESEX.

Sir,—Please let me know through the *Advocate* if it will answer to haul green manure right from the stable and spread it on the snow.

UNION ROAD, ONT.

If you do not use straw for bedding, the most economical way to treat manure is to spread it on the snow. If mixed with straw the manure should be fermented before it is hauled out. By using absorbents under the cattle to take up the liquid manure and for bedding, both labor and manure are saved by putting the dung directly on the field. For further particulars read our articles on “How to Save the Manure.”

Sir,—1. Would you be kind enough to let me know the reason that extra fat cattle get the prizes at the shows in preference to other cattle equally as good, although not so fat? 2. Do you consider cattle set to show, and so fat that they cannot walk any distance, could bring as good stock as ordinary fat cattle? 3. Do you think Muskoka would be a good place for sheep farming?

ELMIRA, ONT.

A. E. R.

1. Because the prevalent craze is in favor of beauty of form and outline, which is increased when the animal is fat, although this condition is detrimental to all the most desirable qualities. 2. Decidedly not; for “like begets like” 3. The climate of Muskoka being dry, it is well adapted to sheep farming; and large areas being too rocky for cultivation, and only fit for grazing, increases the adaptability of the country for sheep husbandry.]

Sir,—How can the weight of hay be ascertained by measurement?

CLEAR CREEK, ONT.

[Five hundred cubic feet of hay (timothy and clover mixed) tramped in a stack or mow in the ordinary way, will weigh one ton. After thirty days the bulk will decrease five to ten per cent., after which time the shrinkage is not great. Early cut hay will pack into less space than late cut, but the above figures represent averages. Timothy or clover alone will require ten to fifteen per cent. more space.]

Sir,—Enclosed please find a spear of grass which I find in bunches over my farm. Am asking for information, as I would really like to know. Let me know what you think it is in your next *Advocate*.

WINONA, ONT.

A. F. C.

[The specimen is like no known grass; it must be a stalk of timothy, the seeds having sprouted and grown so as to form a large cylindrical, green head, but your sample is too much withered to admit of close inspection. You will possibly have observed that part of the seeds of other heads have sprouted in the same way, in which case the timothy will be more easily recognized. Please make close observations next season and let us hear from you.]

Sir,—For the benefit of your readers I may mention the way in which I deal with Canada thistles. 1. Plow the land midding deep anytime after harvest. 2. Rip it up as for turnips before the frost sets in. 3. Go crossways

with the wooden harrow in the spring. 4. Then plow it with the gang plow or other plow. Anything sowed on that field will be cleaner than if it had been summer plowed. I have tried it for the last 6 years and always found it to succeed.

ELMIRA, ONT.

A. E. R.

Sir,—By this mail I send you a marked copy of the American Dairymen, reporting by excerpt from the Scotsman, the great cheese show at Kilmarnock, Scotland. You will observe that these papers give to American cheese and the American system of cheese making the credit that rightfully belongs to Canada and the Canadian method. The error, I dare say, is quite inadvertently fallen into by the Scotch journal mentioned, as well as by other Scotch papers in the same connection, because loose writers in Britain class everything that comes from this side of the Atlantic as American. Not in the same way, however, could the New York writer use the word American. Rather is it employed to obtain for American cheese the credit of success won by Canadian goods. Nor justly can the “Dairymen,” as in the last paragraph of its editorial, seek to leave the impression that it is the American system of cheese manufacture which has won its way into such marvellous favor in Scotland. For the method Mr. Harris has been teaching is strictly the Canadian method, of which he acquired a knowledge in our leading factories through his connection with the well known cheese exporter, Mr. T. Ballantyne. In this brief letter I do not take time to discuss the difference between the American and Canadian systems of cheese making; some other time I may. Presently let it suffice to say that our Canadian system, while not the creature of any one individual, very largely owes its excellence and the superiority of the product made according to its method, to the efforts and instructions of such men as Mr. T. Ballantyne and Prof. L. R. Arnold. At one time exporters were said to brand our best Canadian cheese as American to help its sale in England. Now that the name Canadian cheese has secured for itself a place of merit in the Old Country markets, as shown by the higher prices paid, and the preference that is, even then, given to it over American cheese, we should jealously see that our Yankee cousins do not snatch from us the honor and credit that rightly belongs to Canada and Canadians. Honor to whom honor is due.

COISWOLD, ONT.

J. W. R.

Sir,—I own a cow which lost her calf last spring, and her udder became very large. I think it had been formerly spoiled. This fall it swelled up again. Probably she lost her calf again. She has been troublesome for some time. Locked like it would kill her. Would she, if she recovers, be worth keeping for her breeding? Would she be a safe breeder again? What is the best way to reduce a cow’s bag when it is very hard and swollen? I have cut it and it ran for some time, but is not yet entirely well. As she is a thoroughbred I wished to obtain some of her offspring before disposing of her.

PLATT’S CITY, MO., U. S.

J. J. M.

[We think that she would not be a safe cow to breed from. It would be more advisable to feed her for the butcher. To reduce the udder when swollen and inflamed, give her a dose of purgative medicine, Epsom salts, one pound; ginger, two drams; carbonate of soda, two drams dissolved in quart of water and given as a drench. Apply hot fomentations to the bag. It would also be well to apply goose oil after bathing to keep it soft. Have her milked often.]

Sir,—Will you please tell me what is the matter with my mare and how to cure her? She is a blood mare, bought when two years old. Shortly after I got her she took lameness in her hind leg; seemed to be stiff like rheumatism. That was two years ago this summer. She got very lame in the same leg, stifle joint seemed to fly out when going down hill and hurt her very much. I put stifle shoe on and turned her out; got some better, she does not bring that foot forward as far as the other, and cannot raise it up high from the ground. Is worse after a drive. Does not stand on that foot in the stable. That hip is higher than the other, and sticks out more.

ATHOL, N. S.

J. C.

[From your description it is luxation (or partial slipping of its place) of patella or stifle bone. Use strong astringents around the stifle joints, such as strong oak bark tea or alum water for about a couple of weeks, twice a day, then apply a cantharidine blister once every two weeks, and grease it the third day after each application with a little lard. You might also apply a pitch plaster around the joint.]

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NOTICE TO AGENTS.—In obtaining new subscribers for 1885 you may include three numbers of 1884, thus giving new subscribers 15 numbers for \$1.

The Household.

Clothing for Cold Weather.

The usual dress is sufficient in quantity, and often good in quality, but is very badly distributed. There is too much about the trunk, and too little about the lower extremities.

The legs and feet are down near the floor, where the cold currents of air move. The air is so cold near the floor that all prudent mothers say, "Don't lie there, Peter; get up, Jerusha Ann; play on the sofa: you will take your death cold lying on the floor."

Besides this, the feet and legs, on account of their being so far away, and on account of their size, with the air all about them, are disposed to be too cold, even without being in a colder atmosphere.

Under all these circumstances, men wear one thickness of wool and cotton and one thickness of black cloth about their legs, add three or four times as much about their chests; and now they often add an immense pad called a "Chest Protector."

During the damp and cold season the legs should be encased in very thick knit woolen drawers, the feet in thick woolen stocking, and the shoe soles must be as broad as the feet when fully spread, so that the blood shall have free passage.

I will suppose you have done all this faithfully, and yet your feet and legs are cold. Now add more woolen, or, if you are to travel much in the cars or in a sleigh, wear a pair of sheep-skin drawers.

Three ladies in every four suffer from some congestion in the upper part of the body. It is felt in a fullness of the head, in sore throat, in palpitation of the heart, torpid liver, and in many other ways. It is well known that a hot foot-bath will relieve for the time being any and all of these difficulties.

about the chest, throat, and head, including nasal catarrh. I know nothing so effective as abundant dress about the lower extremities.

The bath is a good thing, exercise is a good thing, friction is a good thing; but our main dependence in this climate must ever be warm clothing. Already we overdo this about our trunks, but not one person in ten wears too much clothing about the legs.

Family Circle.

RALPH ELIOT'S CHRISTMAS GIFT;

OR, ONLY A CHILD'S LOVE.

BY THE AUTHOR OF "JULIET WOODVILLE'S DOWER," "PROVED OR NOT PROVED," "ROY," ETC. ETC.

CHAPTER I.

"Only a child's love! only a child's love!" repeats Annabel Gray, as she stands in the gloomy old dining-room of Moor House, looking into the red gleam of the great wood fire on the hearth with that wistful eye.

The words seem to puzzle and annoy her as she ponders them, with her pretty puffed-up eyebrows puckered into a frown under her considering-cap—a very becoming head-dress to bonnie Annabel.

She makes a pretty picture, standing there in the fire-light, tugging her fan, and looking rather out of place in the great gloomy room, with its dark oaken ceiling and wainscoting, its time-darkened oil-paintings, its worn Turkey carpet, and heavy dark velvet curtains.

Very few people share this opinion of her. Outsiders, as a rule, regard the old mansion, dilapidated and time-worn, as it is, as anything but a desirable residence; and yet, with all its disadvantages, Annabel Gray thinks it the nicest and best home in the whole of Yorkshire!

And then its situation, the fault-finders said—so lonely, so out of the beaten track, standing, as it did, alone in the centre of the wide-spreading moor, two miles from habitation, four from the nearest town, not a neighbor to drop in during the long, lone winter evenings, when the roads were almost, nay, quite, impassable sometimes from the snowdrifts.

Ten years ago, when she came to Moor House, she was a bonnie, willful little maiden of nine, with a mass of brown curls and saucy brown eyes; now she is a grown-up young lady, rejoicing in a train of so many feet long, a lover with an un-usual share of buttons, and tiny, high-heeled Louis XV. slippers, one of which she is admiring industriously as she stands waiting for her guardian, who is to take her to a dance at Claremont Hall.

Annabel is an heiress. When she completed her eighteenth year she came into a pretty little property of eight hundred acres, so she is quite justified in wearing such a pretty, expensive ball toilet of creamy silk and soft lace, while on her throat and wrists shine some old-fashioned gems of rare beauty and value, which vie with the lustre of her brown eyes.

Annabel is an heiress. When she completed her eighteenth year she came into a pretty little property of eight hundred acres, so she is quite justified in wearing such a pretty, expensive ball toilet of creamy silk and soft lace, while on her throat and wrists shine some old-fashioned gems of rare beauty and value, which vie with the lustre of her brown eyes.

with a considerable percentage of admiration in their expression.

Annabel returns the glance saucily, surveying him from head to foot, and nodding approval. A she turns from him to the fire again, she sees the reflection of both faces in the mirror over the mantelpiece. His is the face of a man of six or seven and thirty, not handsome and without either regularity of features or beauty of coloring to commend it.

"Have you said good night to Aunt Mary?" he asks, as he takes up her opera cloak and wraps it carefully around her.

"Of course I have," answers Annabel, nestling her chin in the soft swansdown. "Put on your ulster, guardie, for we are late."

During the long drive Annabel chats gaily. She seems in the wildest spirits, and her guardian listens with a smile which is more than half sad; and he is so silent himself, that at last Miss Annabel pouts, and tells him he is a "cross old guardian," in which assertion he acquiesces with a sigh.

The ball-room at Claremont Hall is full when they arrive—the hall is at its height, and Lady Curlingham greets them with amicable approaches for their tardy appearance.

"Poor Sir Edgar is in despair, Annabel," she says, smiling. "He is imagining all kinds of evil, and has just been inquiring most anxiously if there is any fear of an upset en route. Ah! here he comes!" she adds, as a handsome young man of good appearance, with smiling blue eyes and drooping golden mou-tache, comes forward and greets Annabel with the greatest empressement, while the girl blushes, and steals a shy glance at Ralph Eliot's dark proud face.

"I am afraid I am to blame," says the guardian, smiling. "Have I been the cause of your losing any of your dances, Dusan? I am truly sorry. Be off now, then, and be very happy, little girl."

As the young people move away and mingle with the dancers, Lady Curlingham and Mr. Eliot look after them in silence; the slight girlish figure in its soft shining dressery; the tall, graceful form of the young man, his handsome curly head stooping over his companion's fair face.

"They make a bonnie couple," smiles Lady Curlingham. "Are you prepared to give her up to him, Ralph?" There is a momentary silence; a sudden gleam of pain flashes into Ralph Eliot's dark eyes, and dies away; then he answers:

"If it be for her happiness—yes," he says, very quietly. "Sir Edgar is a thoroughly good fellow," her ladyship says, cordially. "Many a girl will envy Annabel her conquest. It will be pleasant for you to have her settled near you."

"Yes," Ralph answers, a trifle wearily. "I look upon her as a child still. It seems but yesterday that she came to me first."

"A long yesterday," Lady Curlingham answers. "Find youself a partner, Ralph; I suppose you know almost everyone here?"

"My dancing days are over," says Mr. Eliot, with a laugh. "I would rather watch the young people."

"Lazy fellow! Look! there is Miss Bay looking at you expectantly."

Ralph shakes his head, and joins a group of non-dancing men, who are discussing the dancers. Ever and again, as he stands chatting carelessly, his eyes search among the faces for Annabel's, and he sees it often, lovely, radiant, sparkling—and often, oh! how often beside it that other face, with its smiling blue eyes and golden moustache!

Looking at the two, so bright, so happy, so beautiful in their youth and happiness, Ralph wonders what this Christmas-ide will bring to his little ward, and strives to stifle a pain at his heart which he cannot, or will not, account for.

Somehow the gaily around wearies him to-night; he, who is usually so genial and unselfish, seems as if the happiness of others palls upon him, and makes the lines of his own lot more apparent. After a time he leaves the ball-room and takes refuge in a little boudoir which has hitherto escaped the attention of Lady Curlingham's guests. It is a pretty dainty room, and as he throws himself into a deep arm-chair, Ralph Eliot glances around him at the evidences of wealth which surround him, and sighs a little impatiently. Then he frowns at the folly of a sudden wish that he was the wealthy man that his father was before that unfortunate speculation brought comparative poverty to his ancient home. But he has not much leisure for meditation or useless wishing, for there comes a soft rustling of silken folds, a lighting, for there comes a soft rustling of silken folds, a lighting, for there comes a soft rustling of silken folds, and glancing up, he sees Annabel.

"May I speak to you?" she says, in low, measured tones. "Shall I disturb you, guardie?"

"Of course not, my child. What is it? You are not ill?" he asks, quickly, seeing she looks pale and agitated.

"No, oh no! Sit down, Ralph," for he has risen in the momentary alarm, and is looking at her anxiously.

He places a chair for her, watching her varying color and seat, standing beside her, watching her varying color and drooping lips; his own face grows more colorless, and his lips meet with a firmer and more resolute frown.

"Please sit down," she says again, with a little nervous laugh. "You look so big and formidable standing there, and I have something particularly to tell you."

Ralph crosses the room slowly and closes the door, with so much deliberation that it seems as if he waits to put off her confidence as long as possible. Then he resumes his seat, and waits quietly.

"You are not vexed with me, guardie?" she says then, as the gravity of his manner strikes her.

"No, little one; why should I be?"

"I do not know. Oh! guardie," (she turns to him with the prettiest little movement of entreaty), "I am so bewildered. Will you help me? Will you tell me what to do?"

"How can I, dear, unless I know what it is?" he says, very quietly, playing with a silver chain which suspends her fan at her side. "You have not told me yet, Belle."

"Sir Edgar Dunstan has asked me," she begins, then hesitates, and is silent.

"Has asked you—well—go on, Belle."

Ralph Elliot speaks with some constraint, and his voice is almost like the voice of a man in pain.

The girl lifts her eyes to his fully and clearly, as she replies.

"He asked me to be his wife!"

There is another silence—a longer one this time. Annabel has dropped her long lashes again, but she has put her little gloved hand over the fingers playing with her chain, and leaves it there.

"And you have decided, Annabel?" asks her guardian, quietly.

"Ah! that is where I want your help," she says, quickly. "Oh! Ralph, you have always advised me so wisely—tell me, now, what I ought to do."

"I cannot answer for you, Annabel," he answered, in a troubled voice. "It is a question that must be decided by your own heart only. How can I tell what your wishes are?"

"What are yours?" And again the lustrous eyes meet his frankly and inquiringly.

"Mine are for whatever makes my child's happiness," with a quiver in the deep, grave tones; and Annabel bends her face and touches his hand with her soft, red lips.

"You must tell me what to do," she goes on, in a minute or two. "You have taken all my troubles on your shoulders ever since I came to Moor House, Ralph."

"This is not a trouble, Belle," he rejoins with a faint smile. "Surely you can have no difficulty in deciding."

"What does your heart tell you, little one?"

"What do you tell me?" she still persists. "Guardie, surely it is your duty to advise me. What do you wish me to do?"

It is a question easy to answer, it would seem; but Ralph, usually so firm and decided, hesitates strangely, and a pained expression crosses his dark face. What he wishes her to do, he thinks, wearily, is not what she will choose.

"Dear," he answers gently, "I think if you can hesitate, you can hardly need advice."

"Discuss it with me, then, guardie."

The hand under her soft cheek is a little unsteady as Annabel turns her lips to it again softly. Does she know what he suffers, he wonders; is she trying to console him?

"Sir Edgar is good and true?" he begins then.

"Yes."

"And generous, and brave, and noble?"

"He is all that."

"And handsome, rich, and titled. He would make any woman happy?"

"Yes."

"You like him, Belle?" goes on the tender, grave tones.

"Yes," she answers slowly, and hides her face on his arm, with a little sob of excitement.

"Heaven bless you with all happiness, my little girl!" he says, gently, putting his hand caressingly on the bowed head; and Annabel's eyes are hidden, so that the white change in his face escapes her notice. "Edgar Dunstan will make you happy, never fear. The man you love is worthy of you, my child. I can give you to him in all faith."

"Yes," she rejoins, dreamily, "the man I love is worthy of all love. It is no child's love I feel for him, Ralph; it is a woman's affection, deep and true. Oh, Ralph, tell me, do you wish me to marry Sir Edgar?"

"I can wish you no better husband, Annabel."

A short pause ensues, then Annabel lifts her head slowly from a its resting-place.

"Is he waiting for your answer, Belle?" asks her guardian. "You must not keep him in suspense, dear. Shall I tell him, or will you?"

"I will," she answers slowly, toying with the silver chain with which his fingers had played.

"Ralph," suddenly, "shall you miss me a little?"

"I shall miss you greatly," he says, very low.

"Ralph, don't you care? Are you not even a little sorry to let me go?"

"Then his anguish breaks out in two short sentences: "Do I care! Annabel—you know!"

He puts her hands from him, and rising from his chair, crosses the room. The girl's eyes are very full of tears.

"Will you send Sir Edgar to me here?" she says, in a few moments. "It is not right, as you say, to keep him in suspense. You will find him in the library."

"And your decision is—?" he asks very abruptly.

"My decision is what you wish it to be," she rejoins, quietly.

"That is well."

He leaves her, and going to the library, sends Sir Edgar to receive his answer, while he himself goes out into the open air, fighting desperately against the suffering which is unmaning him—which is greater than he has ever conceived possible.

There is no need to try and explain away the pain: he knows only too well, by the immensity of his anguish, how deep his love for Annabel is. And she is his no longer!

He must stand by silent and witness Sir Edgar's happiness; he must bear up under his own suffering with a smiling face, so as not to cloud his darling's bright future, for she loves her handsome lover with no "child's love, but a woman's affection—deep and true." His little Belle who so short a time ago had been all his own, how could he bear his life without her?

How terrible it was to imagine the home which she had brightened so long, deprived of her sweet presence; how much more terrible to go to that other home, of which she would be the light, and see the devotion to her husband and his pride in her.

"My little darling," groans poor Ralph, as he paces up and down the dark, cold alley, "how shall I give you up?"

They drive home together, over the wild moor. Anna-

bel nestling in her soft white furs; but some how she does not slip her hand into Ralph's, as her wont is on similar occasions, or rest the pretty head against his shoulder, and he feels that already he is less to her than he has been in the past.

"Well, little one," he says, with an attempt at cheerfulness, as the carriage stops at Moor House, "what did you say to Sir Edgar?"

"I will tell you on Christmas-day, guardie," she answers.

"You are tired to-night, and so am I. And do you know, Ralph, I almost feel as if I had vexed you."

"Vexed me, dear?" he rejoins, as they go up the steps into the hall together. "How?"

"Ah! that is what I do not know," and Annabel lifts her face for her good-night kiss.

"Vexed me," he repeated. "No, you have not vexed me. Good night, my darling."

He stoops his lips to her brow for a moment, and stands watching her as she goes up the stairs, the bright diamonds flashing as she moves her arms to throw the fur-lined cloak from her bare shoulders. At the head of the stairs she turns, and seeing him standing there, says "Good-night" again, smilingly. As she disappears, a sudden darkness seems to fall on Ralph Elliot, a fore-taste of the darkness which will come when she is gone forever!

(To be Continued.)

Minnie May's Department.

MY DEAR NIECES.—We are fast approaching that festive season when every door should be opened and every heart unlocked as in the good old days of yore. Then peasant and peer were brought together and all ranks blended in one warm, generous flow of joy and kindness. The celebration extended from Christmas Eve to Twelfth night, January 6th, or as it was sometimes called, "Little Christmas." The preparations began long beforehand, when bountiful stores of good things were laid in. The houses as well as the churches were profusely decorated with evergreens, holly, ivy, and mistletoe, a bunch of the latter covered with berries being hung in the drawing-room and servants' hall, and if any *fair one* was caught by her admirer under the mistletoe bough, he was entitled to a kiss, but for every kiss he took, he had to pluck a berry, and the privilege ceased as soon as the berries were all gone. In those days the yule log or Christmas block was thrown upon the hearth, and carollers too went round from house to house singing Christmas melodies.

Sir Walter Scott thus sings of the old time pleasures of Christmas:—

"The damsel donned her kirtle sheen,
The hall was dressed with holly green,
Forth to the wood did merry-men go
To gather in the mistletoe.
Then opened wide the Baron's Hall
To vassal, tenant, serf and all;
Power laid his rod of rule aside,
And ceremony doffed his pride;
The fire with well dried logs supplied,
Went roaring up the chimney wide,
Where the huge sirloin reeked hard by,
Plum porridge stood and Christmas pie;
Nor failed old Scotland to produce
At such high tide her savory goose;
Then came the merry maskers in
And carols roared with butchers din;
White shirts supplied the masquerade,
And smutted cheeks the visors made;
England was merry when
Old Christmas brought his sports again;
A Christmas gambol oft would cheer
The poor man's heart through half the year.

Although having lost many of the old English customs, we have adopted those of other countries, for instance, it is from the Germans that we get the ideas of the Christmas tree, decorated with gifts; hanging up stockings, etc.

Nowadays in all enlightened countries, Christmas is the day when, people possessing love for their families and fellows, manifest it by some gift. It is especially the children's

day, but the aged as well as children can receive and appreciate Christmas tokens. Dickens says, "it is good to be children sometimes, and never better than at Christmas, when its Mighty Founder was a child Himself." Therefore we older ones should be quite as much surprised and delighted as the girls and boys over Christmas preparations and festivities. We should make it "a day of gladness and of feasting, and of sending portions one to another, and gifts to the poor."

Christmas is the one time of all the year when families gather and friends unite. Therefore let good will abound; let Christmas cards be scattered and gifts be distributed; and let smiles and good cheer be seen in every face.

The prize of a fine *Meteor Alarm Clock* for the best essay on "Kitchen Economy" has been awarded to Mrs. S. D. Robinson, of Port Hope, Ont.

We now offer a prize of a pearl card-case for the best essay, the subject being "Music and its Influence." All communications to be in by the 15th February.

MINNIE MAY.

PRIZE ESSAY.

Kitchen Economy.

BY MRS. S. D. ROBINSON, PORT HOPE, ONT.

"Waste makes want," is an old saying, and equally true is it that economy is the basis of wealth. If we look around us we see on every hand a wise economy in the arrangement of Nature's laws, and many useful lessons, as well as much enjoyment, might be gained if her operations were studied with more observant eyes. The beneficent Creator of the universe has placed everything in order, and the smallest atom which He has set in motion is not beneath His notice and care.

Economy and retrenchment are considered virtues in the management of public affairs, and although the kitchen seems an atom compared with the universe and the nation, yet it is an important essential of the home, and a judicious and economical management of its affairs conduces to the prosperity and happiness of the family. As the family is a part of the nation, would it not enhance the welfare of society and the nation at large, if every family was imbued with the idea that it is wicked to waste, and that an economical disposal of one's property is the surest method of obtaining the greatest amount of good from it. If all were full of this spirit, what a grand nation we should soon have. This sounds Utopian, certainly, but nevertheless I think it would be a very desirable state of affairs. But it is useless to think of it. We shall never have this modern Utopia, for while the world lasts there will be extravagant and wasteful people and consequent misery.

As the kitchen is such an essential part of the home, it would be well for the mistress of every household to consider that on her ability to manage it depends in a great measure the welfare of her family. If she thoroughly understands the adapting of her expenses to her means and the best manner of using the things at her disposal, she will materially contribute to the comfort and happiness of each member of her household. On the other hand, if she is

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tial part of e mistress of er ability measure the roughly un- enses to her g the things y contribute ach member nd, if she is

extravagant and wasteful in the management of what is committed to her care, her family must in consequence suffer. Every girl before she assumes the direction of a home, should study the art of economy. If she has not acquired it, a part of her education has been sadly neglected. Every mother should impress on the minds of her daughters the wisdom of being economical in the household expenditure.

No less a person than Burke, in his celebrated speech on the economical reformation of the civil and other establishments, in speaking of the royal household, 1780, says: "It is impossible, sir, for any person to be an economist where no order in payments is established; it is impossible for a man to be an economist who is not able to take a comparative view of his means, and of his expenses, for the year which lies before him." And again, in speaking of Lord Talbot's administration of a department in the royal household, he says:

"Economy was then announced as a maxim of the reign. He told the House of Lords that he had attempted to reduce the charges of the King's tables, and his kitchen. The thing, sir, was not below him. He knew that there is nothing interesting in the concerns of men whom we love and honor, that is beneath our attention. 'Love,' says one of our old poets, 'esteems no office mean.' Frugality, sir, is founded on the principle that all riches have limits. A royal household, grown enormous even in the meanest departments, may weaken and perhaps destroy all energy in the highest offices of the state. The gorging a royal kitchen may stint and famish the negotiations of a kingdom. Therefore the object was worthy of his, was worthy of any man's attention."

If the affairs of the kitchen were not beneath the attention of a nobleman, surely the mistress of a household ought not to consider her kitchen beneath her notice. It is a duty she owes to herself and family to regulate everything to the best advantage. She should inform herself concerning the nutritious qualities of food and the best manner of preparing it. The health of her family demands it. Ostentatious luxury does not secure the best physical or mental development, no matter what wealth is at one's command. And bear in mind that wealth, if handled too carelessly, frequently eludes one's grasp. Rome, when she submitted to be governed by luxury, became enervated and soon lost her pristine greatness. The human frame when gorged with luxurious food becomes enfeebled, the intellect dull, and the one who indulges himself thus is an almost useless member of society. On the other hand, a judicious care in the choice of food is followed by the inestimable blessing of good health, a saving of doctor's bills, and active mental forces. A great deal of the ill-health in the country may be traced to an excessive indulgence in the good things of the table.

If you live on a farm do not, because all the articles, or most of those which are wanted for the table, are raised on the farm, fall into the error of thinking that a prodigality in the use of them must necessarily follow. By no means do I advocate a penurious stinting of the table, but I want to present to your consideration that though your meat, flour, cream, butter, eggs and fruit come so readily to hand, they

should no more be recklessly wasted than if you had paid money for them. They possess money value, and if sold would realize cash.

It is not wise economy, as is too often the case, to deny your family the best of what is raised on the farm. Let them have eggs and poultry if they want it; you can sell the pork, and the difference will not amount to much. Do not, because you send your milk to the cheese factory, neglect to keep sufficient for a supply of cream, and milk for puddings and custards. You must remember, too, that children are fond of milk, and that it is a beneficial article of diet for them; also that the farm laborers are generally partial to cheese. It is considered nutritious, and it is well to have a due regard for articles of food which support strength.

The economical housekeeper will see that nothing is left to waste. There are so many little things that are considered insignificant (in fact beneath one's attention, if one is not practised in the art of economy,) that it would be well to look after. In the course of a year these small items would amount to considerable and the money value no despicable sum. I know of a farmer's wife who supplies her home with all the little articles which cultivated people crave, such as books, magazines, drawing and painting materials, and *et ceteras* which contribute to the home pleasures of the young people, from those little and apparently insignificant sources. I have seen the water that pork is boiled in thrown away, and in other instances I have seen it carefully saved, clarified and sold. It is cheaper than lard, consequently commands a ready sale. Some housekeepers prefer using it themselves, and thus be able to sell their lard. Then again, if eggs and butter are packed when cheap, they will come nicely for home consumption when these articles command fancy prices. If you have more than you want, or prefer using the fresh article, there will be still considerable gain if you sell the packed, in consequence of the advance in price.

It is not economical to buy cheap articles for kitchen use. If properly cared for you will save in the long run by buying good articles. Brooms and brushes will last longer for being good; so also will towels and table linen. Granite and porcelain kettles and saucepans appear expensive at first, but in the end are cheaper than tin. The practical housekeeper knows all this; she understands the little leaks so apparently trifling that will make drains on her purse, and guards against them. Articles liable to rust are carefully dried before being put away; soft towels are used for silver, china and glass; dried fruit is secured from worms; spices are corked tightly; soap is dried before using, and all the articles too numerous to mention are conscientiously looked after. In a virtuous wife: "She looketh well to the ways of her household, and eateth not the bread of idleness."

A pretentious person said to a resident of a country village, "How would a lecture by me on Mount Vesuvius suit the inhabitants of your village?" "Very well, sir; very well, indeed," answered the resident. "A lecture by you on Mount Vesuvius would suit them a great deal better than a lecture by you in this village, sir."

The Mistletoe.

In old-fashioned English families a branch of the mistletoe is suspended, on Christmas eve, from the ceiling of the hall. Any woman who passes beneath the mystic spray incurs the penalty of being then and there kissed by any man who chooses to avail himself of the privilege. One of the superstitions associated with this custom, is that the maid who is not thus kissed at Christmas will not be married during that year.

This hanging of the mistletoe is a relic of the days of Druidism, handed down through the centuries. The Druids revered the plant when found on the oak, the favorite tree of their divinity Tutanes. At the winter solstice a great festival was celebrated in his honor. The people, led by their priests, the Druids, went in procession to gather the mistletoe. When the oak was reached on which it grew, two white bulls were bound to the tree. The Chief Druid, clothed in white, ascended it, and with a golden knife, cut the sacred plant, which was caught by another priest in the folds of his robe.

The bulls, and often human victims, were sacrificed, and the mistletoe, divided into small pieces, was distributed among the people. They hung the sprays over the doors of their houses, as a propitiation and shelter to the sylvan deities during the season of cold.

In the Scandinavian mythology the mistletoe is a plant of no mean importance, it, so the legend relates, having been the instrument of slaying Balder, the god of eloquence and poetry.

Balder one day told Friga, his mother, that he had dreamt a dream which foreboded his death. She, to protect her son, secured an oath from fire, air, earth, water, the animals and plants, that they would do Balder no harm. He, being thus assured, took his place amid the combats of the gods, and fought without fear.

Loake, his enemy, seeing that not one of his arrows, which fell in showers upon Balder, did him the least harm, determined to discover the secret of his invulnerability. Disguising himself as an old woman, he paid his court to Friga and complimented her upon the valor and good fortune of her son.

She, seduced by the flattery, answered that nothing could injure Balder, as all the powers of nature had sworn not to harm him. She added, however, that there was one plant which she had not invoked, thinking it too insignificant to inflict injury on any one.

"And what may be the name of that plant?" asked Loake, in the blandest of tones.

"It is a feeble little shoot which grows on the bark of the oak," answered the simple Friga.

Loake immediately procured the mistletoe and made from it an arrow. Entering the assembly of the gods, he said to the blind Heda.

"Why do you not contend with the arrows of Balder?"

"I am blind and have no arms," answered Heda.

"Balder is before thee. Shoot!" said Loake, handing her the arrow of mistletoe. Heda shot and Balder fell dead, pierced by the insignificant plant.

Two New Optical Illusions.

All optical illusions which have for result the exhibition of an isolated portion of a live human body, such as a head separated from the trunk, a bust without a body, or a body without a head, always surprise and interest the spectator.

We learned in early childhood that life is impossible under such circumstances, and yet, if the experiment be well presented, we distinctly see the reality of what our judgment and experience are in accord in declaring impossible. We are tempted then to doubt the evidence of our eyes, notwithstanding our daily confidence in those organs.

The spectator, upon entering, sees in front of him a large panel in which there is an aperture about 5 feet square closed by a silk curtain. When the latter is drawn aside, there is seen a small and elegantly decorated stage,

would occupy if the head possessed one. The absence of the body is therefore well demonstrated, and the curtain drops.

Such was the evidence of the eyes, but the reality was entirely different. The head was indeed real, and was seen directly, and the same was the case with the top and a part of the sides of the stage, but aside from this the rest was only an illusion. The stage had no back, no floor, no sides, and the aperture seen in the rear was not in that place.

The illusion was obtained by means of a simple mirror, which, starting from the upper part of the back of the stage, descended obliquely to the front. In the centre of this there was an opening which was concealed by the satin collar of which we have just spoken, and through this the young girl passed her head. The inclination of the mirror was very easy to determine; it was in fact indicated by

an angle of about 35° or 40°, while it rests upon a book; then place above it a piece of cardboard, or anything else, and it will be found by experiment what inclination should be given it in order to obtain, through reflection, the semblance of a vertical back.

Upon bringing the same cardboard near to the sides of the mirror, the part that will be above the latter will seem to be prolonged beneath. If one wishes to take the trouble to fix several pieces of cardboard in these different positions with pins, he may produce the semblance of a space which is apparently completely empty, while it is cut into two by an inclined mirror. It would be easy thereby to get an idea of the process used for producing the illusion given.

The Mystery of Dr. Lynn.—It starts from the floor; and it is nearly in front, at a very slight distance from the spectator, that we ob-

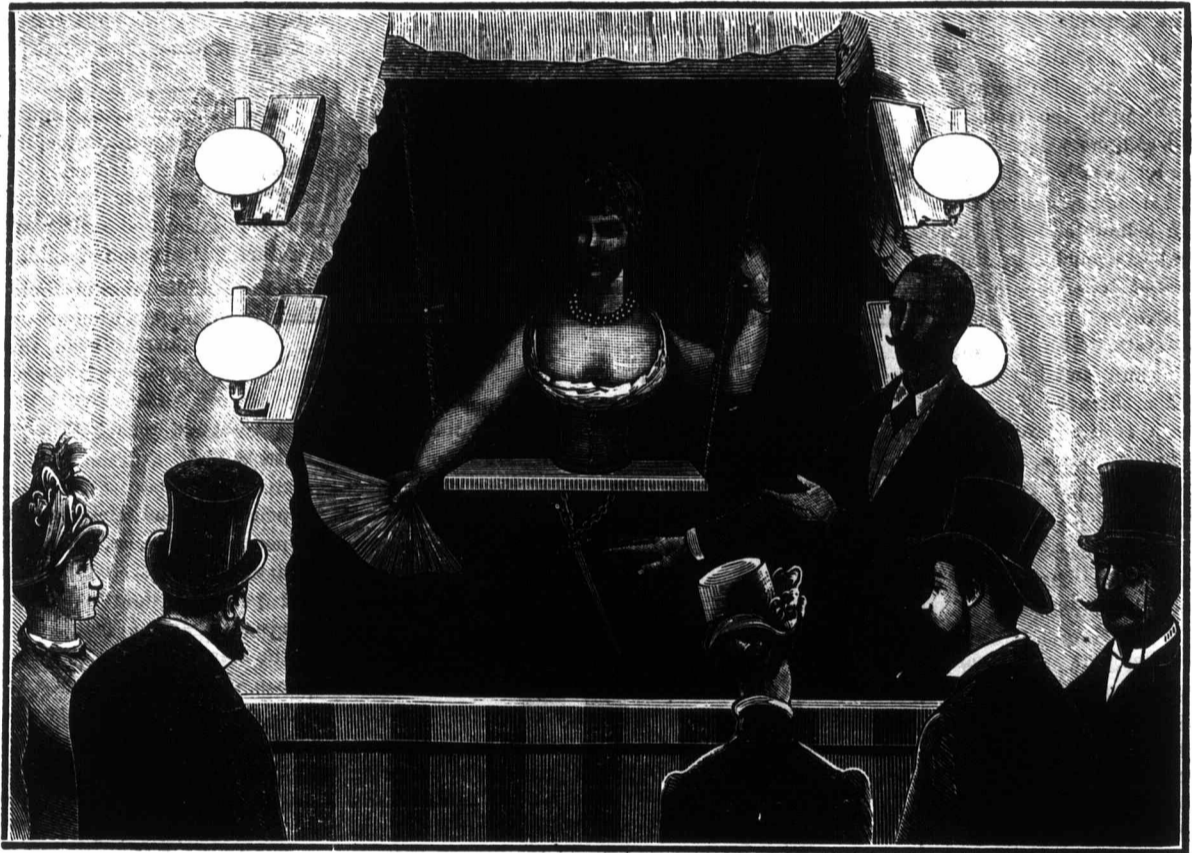


Fig. 1.—The Woman Without a Body.

whose sides may be perfectly distinguished. In the centre of this stage, suspended in space, there is a young girl's head, the neck of which starts from a satin collar (Fig. 2). This head is well isolated on every side; one sees the rear of the stage, the sides, the top, and the bottom, and the light leaves no portion in shadow. The head is living; it speaks and smiles, the eyes move, and the exhibitor further proves it by presenting to it a lighted candle, which it extinguishes by blowing it out. The exhibitor then disappears behind the side scenes along with the candle. He now, as it seems, draws out a panel in the back of the stage, and through the aperture thus formed, the spectator very distinctly sees the top of a table, and upon it, the candle that the head has just extinguished. Now this aperture is directly under the head, but much farther off, and is in the direction that the body

a gold rod designed to hide the line of junction of the mirror and side. Through their reflection in this mirror the anterior part of the top seemed to be the bottom, and the posterior part of the same produced the back of the stage. The sides, of which only the upper portion was seen, seemed to be prolonged and join the bottom. As for the aperture through which the table was seen, that was in reality at the top; the table was vertical, and the candle, which was firmly fixed to it, was horizontal. The farce of blowing out the candle and carrying it behind the scenes was only designed to make the spectators believe that it was the same candle that was seen at the rear of the stage, while it was only a duplicate.

The arrangement of the top and sides with respect to the mirror may be perfectly ascertained by means of a very simple experiment. Take a small, square mirror and incline it at

serve the bust of a woman cut off at the thighs and resting upon a small swing shelf. This woman is alive. Moreover, under a thrust from the showman, the shelf moves laterally. At a certain moment the woman seizes the cords, the exhibitor removes the shelf, and the body is then seen suspended for a few minutes. The showman passes a rod beneath the bust, and around it, and shows that it is completely isolated.

Where is the body? Such is the question that every visitor asks.

A glance at the explanatory figure (Fig. 3) will show how the illusion may be obtained. The lower part of the bust seen is a dummy, upon which the upper part of the woman's body rests, the remainder of her body being extended nearly horizontally upon an apparatus that is capable of swinging and following the motion of the shelf. All this portion is hidden

by opaque black drapery so arranged as not to attract the light to any point.

The bust and shelf receive a very intense light; then immediately behind there is seen intense darkness—an absolutely black background. This latter is rendered still darker by the brilliant cords of the shelf, a metallic chain, a sword suspended beneath it, and a white handkerchief that seems to have been dropped upon the front of the stage by accident. If we add to this, six gas burners with powerful reflectors turned toward the spectators, it will be seen that the latter are, in a manner, dazzled by everything that strikes their eye in the foreground, and that beyond this they see absolutely nothing but a black background.

Such is the explanation that may be given of the mystery of Dr. Lynn—an illusion that rests upon a curious principle in physics.

Work Basket.

We will try and suggest a few things suitable for Christmas gifts.

A **PRETTY TIDY** is made of Java canvas, nearly half a yard square, of any desired color; cream, with blue, pink or cardinal trimmings, is very delicate and pretty. Draw out enough of the centre threads each way to allow a ribbon, two inches wide, to be run in, crossing in centre, where it is finished by a full rosette of the ribbon. Work some pretty design in each corner with wool or silk to match the ribbon, and finish the edge of tidy by fringing both canvas and ribbon about an inch.

TABLE COVER.—Get the very wide momie canvas, the size you wish your cover, and enough satin ribbon to extend twice around the canvas. If you prefer to use two colors of ribbon instead of one, you can do so. Pink and blue, or pink and wine color, are pretty. Satin ribbon with cotton back will do as well as that with silk back, and is less expensive. It should be about an inch and a half wide. About a finger and a half from the edge of the canvas draw out the threads the width of the ribbon and run in one of the ribbons. Half an inch below this one run in the other. Then hem the edges, or allow enough canvas to make a fringe about a finger deep. Coarse netting over bright colored silk also makes pretty table covers.

WORK BASKET.—Take an oval wicker work basket and line the sides with gathered satin and the bottom with embroidered plush; finish both with silk cord. Ornament the outside with a deep fringe of crewels of various colors.

Very pretty toilet sets are made of scrim, which comes with alternate stripes of drawn-work and the plain material. On the plain stripe garlands of daisies are arranged and

worked in crewels. Trim the edges of the covers with antique lace. Satin ribbon about three inches wide, and of whatever color will harmonize with the room for which it is intended, is tied in pretty bows with ends, and one sewed in each corner of the covers. These sets are very easily made, and are light and dainty looking, besides having the advantage of washing well.

Handkerchief, or glove sockets, parlor scrap

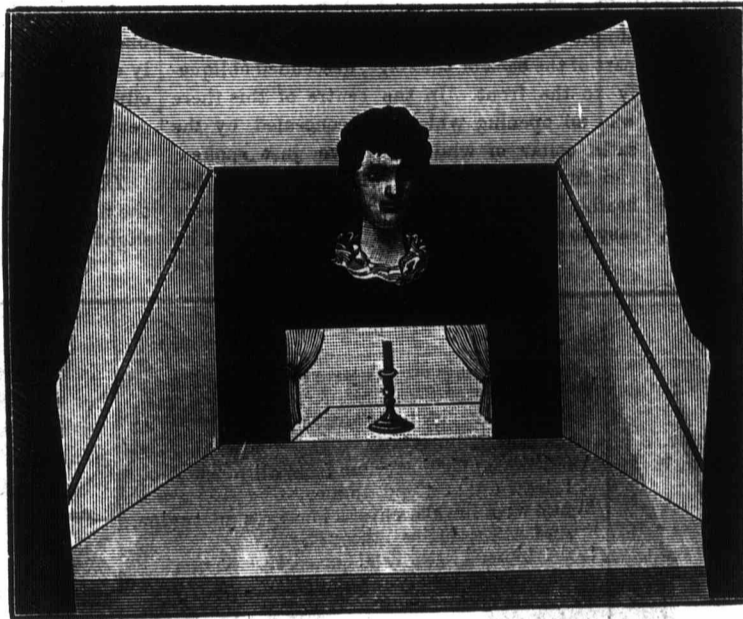


Fig. 2—An Isolated Head in the Centre of a Stage.

baskets, crochet and knit mittens, tidies and brackets of marame twine, etc., are very serviceable and pretty gifts.

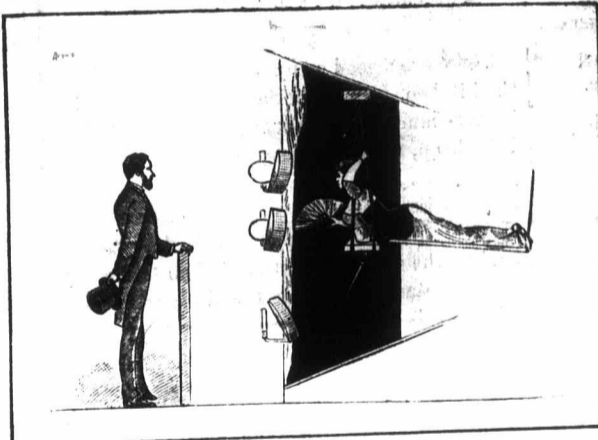


Fig. 3—Explanation of the Phenomenon

Answers to Inquiries.

POLLY.—Egg shells crushed to pieces and put into the decanter two-thirds full of water, will clean it and make the glass look like new. Remember that in sending essays or other matter for the *ADVOCATE*, to write only on one side of the paper and number the pages.

K. JONES.—As you are not the eldest unmarried sister, you should always give your initial or Christian name with your surname, as otherwise people who do not know to the contrary, will write Miss Jones, and naturally your letters will be opened by your elder sister.

PATTIE T.—Should a lady enter a ball-room leaning upon the arm of her escort? If so, which arm should he take? **ANS.**—The gentleman should give his arm as far as the door, the right being taken. The lady then enters first, and the gentleman walks at her left until the hostess is greeted.

W. A. R.—1. By whom was the spinning-wheel invented? 2. Who was Sir William Congreve? **ANS.**—Hargreaves, a native of Lancashire, in 1760, invented what was called the *spinning jenny*, by which a number of threads could be spun as easily as one. 2. A scientific man who lived in the reign of George IV.; he was noted for his invention of lucifer matches and rockets.

MRS. M.—To wash black stockings, put a teaspoonful of gall in the lather, or a slight tinge of blue; a handful of salt or a spoonful of ammonia in the rinse water. Any of the above keep the color in the stockings.

Recipes.

CHRISTMAS CAKE.—One pound sugar, 1 pound butter, 2 of raisins, 2 of currants, $\frac{1}{2}$ pound citron, 12 eggs, $\frac{1}{2}$ pint molasses, $\frac{1}{2}$ pint of brandy or boiled cider, 1 teaspoon cream

tartar, $\frac{1}{2}$ teaspoon soda, salt, cloves and nutmeg to taste.

CHRISTMAS PLUM PUDDING.—Take one pound of good raisins and stone them, 1 pound of currants, which are picked and dry, 1 pound of rich beef suet, minced; 1 pound of stale bread crumbs or soda biscuits, and $\frac{1}{2}$ pound of flour. Mix the bread, flour and suet together in a pan. Beat six eggs in a basin and add to them a pint of sugar and $\frac{1}{2}$ pint of sweet milk; pour this into your pan with the flour, etc., and beat it well for some time, then stir in the currants and raisins, mixing well as you proceed; mix in also a $\frac{1}{2}$ pound of citron or candied orange peel, cut in small pieces, and 1 ounce of powdered cinnamon, $\frac{1}{2}$ ounce ginger, 1 grated nutmeg and a little salt. Next add a glass of wine, brandy or boiled cider. The pudding is now ready to be boiled either in a cloth

or in a pudding-boiler, allowing plenty of room for it to swell; boil for five or six hours. This is a most excellent pudding.

NICK SAUCE FOR ABOVE.—To 2 tablespoons of butter add 10 or 12 of white sugar; work the butter well into the sugar, then place smoothly on a dish and grate nutmeg over it.

PRUNE PUDDING.—A delicious prune pudding is made by stewing a pound of prunes till they are soft, remove the stones, add sugar to your taste, and the whites of three eggs beaten to a stiff froth. Make a puff paste for the bottom of the pudding dish. After beating the eggs and prunes together till they are thoroughly mixed, spread them on the crust. Bake for

half an hour, or until you are sure the crust is done.

PLAIN FRUIT CAKE.—One pint cream, 1½ cups sugar, 2 eggs, cinnamon and nutmeg, a little salt, 1 teaspoon of soda, 2 cups of chopped raisins. Flour to make a stiff batter. Bake in a moderate oven.

Our readers will find the following method of curing beef an excellent one. It was given us by an old English gentleman of experience:—

A SUPERIOR MODE OF SALTING BEEF.

[Highly recommended to the patrons of the FARMER'S ADVOCATE by an old subscriber.]

To 100 lbs. of beef, 6 lbs. of salt, 2 ozs. of saltpetre. 1st.—Cut the meat in suitable pieces for future use. 2nd.—Mix and boil in water sufficient to cover the meat when placed in barrel. 3rd.—When the liquor is boiling immerse each piece of meat in it; let it remain in the boiling liquor one minute by looping a string round it; then place the pieces on a board to cool. 4th.—Boil the liquor a few minutes, and skim it, then set it by to cool. 5th.—Place the meat in the vessel, and pour the liquor on it to cover it until fit for use. It requires to lie in the brine two weeks; then it is fit for use. In this state you will find it more like the tongue.

W WEBB.

The Snow-prayer.

BY T. R. WOODMAN.

A little maiden was out, one day,
Out in the new fallen snow, at play.

And, as she flitted hither and yon,
No sweeter thing the sun shone on.

She tossed the white drift to and fro,
And covered herself in the feathery snow.

The mother looked from the window and smiled
To see the sports of the joyous child.

Her cheek was rosy, her bright eye beamed,
Hawthorne's "little snow-maiden" she seemed.

At length, when weary with play, she hied
To her wonted place, by her mother's side.

And "Mamma, oh, mamma," she said, "do you
know,"
I prayed, when I was out in the snow?

"You prayed, my child," the mother said.
"What did you pray for, little maid?"

"What did I pray for, when out there?
Why, mamma, I prayed the little snow prayer.

My Sunday School verse, mamma, you know,
"Wash me, and I shall be whiter than snow."

O, would that we children of larger growth,
Who would walk in the "way, the life, and the
truth,"

Might daily, from hearts as simple and low
Breathe, "Wash me, and I shall be whiter than
snow."

SWEET PECULIARITIES.—Why can't people say "mother" and "father" in a better way than they do? Words, cadence, inflection, and everything else have got twisted and wriggled out of shape. The New York girl says "Ma-r," with a jerk on the "r." The Philadelphia girl says "Mayar" through her nose. The St Louis says "Ma-mar." The Boston girl says "Mur-mur." The Baltimore beauty says "Mur mur" and "Pur-pur." The little Canadian says "Pa-ah" and "Ma-ah." The Alabamagirl says "Porr" and "Morr." The Brooklyn girl says "Parr-pah" and "Mah-ah." The little London girls say, "Now, po-pow-ah, you make me lowef."

The Christmas Gift.

Around the Christmas tree we stood,
And watched the children's faces,
As they their little gifts received
With childish airs and graces.
We grown folks had our share of fun
In making wee ones merry,
And laughed to see the juveniles
Kiss 'neath the "holly berry."
Beside me sat sweet Bessie Moore,
A lovely dark-eyed maiden,
While near her stood our little Eve,
Her arms with love gifts laden;
Until around the room she went,
The blue-eyed baby, shyly,
And blushing red, into each lap
Her offerings dropped slyly.

But when to me the darling came
All empty handed was she,
And when I asked, "Why slight me thus?"
She answered, "Oh, because we—
We dinna know you tumming here?"
And then, with blue eyes shining,
To Bessie's side she went, her arms
Her sister's neck entwining,
"But something I must have," said I,
"My Christmas night to gladden."
A shade of thought the baby face
Seemed presently to sadden,
Till all at once, with gleeful laugh—
"Oh! I know what I'll do sir!
I've only sister Bessie left
But I'll div her to you, sir!"

Amid the laugh that came from all
I drew my new gift to me,
While with flushed cheeks her eyes met mine,
And sent a thrill all through me.
"Oh! blessed little Eve!" cried I,
"Your gift I welcome gladly!"
The little one looked up at me,
Half wonderingly, half sadly.
Then to her father straight I turned,
And humbly asked his blessing
Upon my Christmas gift, the while,
My long stored hopes confessing.
And as his aged hands were raised,
Above our heads, bowed lowly,
The blessed time of Christmas ne'er
Had seemed to me too holy.

There are a good many uses for oil-cloth in the kitchen. To cover the kitchen table with it saves much labor in scouring and scrubbing. It is cheap, and easily removed. You can cover your pantry shelves with it, and find them easy to keep clean, avoiding the trouble of changing papers. A square of oil-cloth tacked against the wall back of the kitchen table and the washstand, will save the disfigurement of white walls or clean paper by untidy splashes. Another square fastened behind the woodbox will prevent accidental marks, perhaps breaks in the wall there. Cover a few pieces of thin board with oil-cloth, to stand pots and kettles on, and keep a piece handy to put down whenever you need to put down anything which may soil table or shelf.

"That's what I call a finished sermon," said a lady to her husband as they wended their way from church. "Yes," was the reply; "but do you know I thought it never would be."

The Editor of "The Pioneer," a paper devoted to the farmer's interests, and published at Summerside, P. E. Island, writes to us as follows:—I am so convinced that the ADVOCATE should be in every farmer's house, that I will, in the interest of agriculture and the welfare of the farmers in this section, advertise it in The Pioneer free of charge.

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES.—If we were over in merry England just about this time, it is quite possible that we might be found in some cheerful company looking at the Xmas pantomime. What a fund of amusement there is in the wonderful leaps of the supple Harlequin, the beauty and grace of the dancing Columbine, the grotesque antics of the Clown, and the remarkable mishaps of dull old Pantaloon! And the sight of the policeman who chases the Clown, who chases the baker, who chases the Pantaloon, who chases the butcher, who chases everybody until there is a general smashup, which results in the arrest of the small boy who had nothing to do with the trouble, while the Clown gorges himself with stolen sausage, and the Pantaloon bolts a whole pie. What a feast for sore eyes and sore stomachs? But as we are not in merry England, we may well be content with our Canadian sports, for who could help enjoying the skating, tobogganing, sleigh-riding, snow-balling and other numerous Xmas jollities. As this is the concluding number for 1884, I hope my now large family of nephews and nieces will be increased and all join in competition for the prizes which will be offered in the January issue, as will also be the names of the prize winners for 1884. Now put your thinking cap on and prepare some good and original puzzles for next month, which begins the struggle for another year. A certain boy whose name I withhold, is accused of sending in as original, puzzles copied from another paper. Now, even if I am deceived, there are others who are on the lookout and anxious to inform me of any such dishonorable acts. Hoping you will all act fairly and honestly with regard to the puzzles, and wishing you all a Merry Christmas and a Happy New Year.

UNCLE TOM.

A CHRISTMAS STORY.

I had told him, Christmas morning,
As he sat upon my knee,
Holding fast his little stockings,
Stuffed as full as full can be,
And attentive listening to me,
With a face demure and mild,
That old Santa Claus, who filled them,
Did not love a naughty child.

"But we'll be good, won't we moder,"
And from off my lap he slid,
Digging deep among the goodies
In his crimson stocking hid;
While I turned me to my table,
Where a tempting goblet stood,
Brimming high with dainty custard
Sent me by a neighbor good.

But the kitten, there before me,
With his white paw, nothing loth,
Sat, by way of entertainment,
Lapping of the shining froth;
And, in not the gentlest humor
At the loss of such a treat,
I confess I rather rudely
Thrust him out into the street.

Then how Bennie's blue eyes kindled;
Gathering up the precious store
He had busily been pouring
In his tiny pinafore,
With a generous look that shamed me
Sprang he from the carpet bright,
Showing by his mien indignant,
All a baby's sense of right.

Department.

PIECES.—If we were about this time, it t be found in some the Xmas panto- esement there is in supple Harlequin, ancing Columbine, Clown, and the re- Pantaloon! And who chases the , who chases the tcher, who chases general smashup, the small boy who trouble, while the stolen sausage, and ole pie. What a stomachs? But a s d, we may well be sports, for who ting, tobogganing, and other numerous e concluding num- now large family of e increased and all rizes which will be as will also be the s for 1884. Now and prepare some for next month, for another year. withhold, is ac- , puzzles copied even if I am de- are on the lookout any such dishon- l all act fairly and puzzles, and wish tmas and a Happy UNCLE TOM.

"Come back, Harney," called he loudly, As he held his apron white, "You shall have my candy wa'bit," But the door was fastened tight; So he stood abashed and silent, In the centre of the floor, With defeated look alternate Bent on me and on the floor.

Then, as by some sudden impulse, Quickly ran he to the fire, And while eagerly his bright eyes Watched the flames grow higher and higher, In a brave, clear key, he shouted, Like some lordly little elf, "Santa Kaus, come down the chimney, Make my Moder 'have herself."

"I will be a good girl, Bennie," Said I, feeling the reproof; And straightway recalled poor Harney, Mewing on the gallery roof. Soon the anger was forgotten, Laughter chased away the frown, And they gamboled 'neath the live oaks Till the dusky night came down.

In my dim, fire-lighted chamber, Harney purred beneath my chair, And my playworn boy beside me Knelt to say his evening prayer; "God bless Fader, God bless Moder, God bless Sister, then a pause, And the sweet young lips devoutly Murmured, "God bless Santa Kaus."

Puzzles.

1—METAMORPHOSES.

Change pail to well in three moves. "rain to hail in two moves. "lead to gold in three moves. "rug to mat in three moves. MAGGIE F. ELLIOTT.

2—TRANSPOSITION.

Og anm ni het gahsiyw dan sawyib nad tretes. Dan terbag eth guyrnh orop rethe ouy alhls etem. Uryo nedir eth teeware rof cauh desed halls eb. Dan a file fo rome sppieahn ruet uoy lalsh ese. ADELAIDE MANNING.

3—DIAMOND.

A consonant; a limb belonging to the body; a county in Ontario; a noise which we have all often heard; a town by which the Grand River flows; a city in the north eastern part of Ireland; which is always forward; something that all of us should have, and a consonant. EDMUND PEPPER.

4—CHANGED HEADINGS.

- 1. Mien—an ensign. 2. Very small—ceremony. 3. To cheat—to accept. 4. To shrink—a musical instrument. 5. Attack—loyal. 6. To carol—a kind of stone. 7. Rapture—a country. 8. A basket—to meddle. ADA ARMAND.

5—TWO WORDS WITHIN A WORD.

In one of the deep _____ we found _____ we had long sought. If his _____ does not relax _____ to-morrow. While kindling the _____ he sets their new house _____ I never knew anyone so _____ as that little _____ As he handed the _____ to _____ I saw his hand tremble A person is a _____ unless he is _____ over his twenty-first year. ADA ARMAND.

6—CONNECTED DIAMONDS.

- 1. You'll find it in gravy. 2. A weight that is heavy.

- 3. A man's name you'll find. 4. A snare brings to mind. 5. In army, not in navy.

- 1. In bruin and bear. 2. What all boys wear. 3. A kind of meat you'll see. 4. An utensil will be. 5. In string and in snare.

Now if all these you rightly place An author's name you'll downward trace. A. J. TAYLOR.

7—ILLUSTRATED REBUS.



8—One-sixth of celery, one-fifth of onion, one-fourth of beet, a seventh of parsnip, a fifth of melon, one-fourth of corn, equal to what vegetable? ROBT. KERR.

9—SQUARE WORD.

- 1, Something thin or lean; 2, a large bird; 3, another bird; 4, opposite to; 5, gentlemen. A. J. TAYLOR.

10—ILLUSTRATED REBUS.



Answers to November Puzzles.

- 1— Boot, soot, shot, shoe, Beat, feat, flat, flag, flog, Wood, wool, cool, coal, Cot, cat, bat, bet, bed. 2—A new broom sweeps clean. 3—O, wad some power the giftie gie us, To see ourselves as others see us, 'Twould frae monie a blunder free us, 4—Halton, Alton, alto, Lot, to. 5—A youth once shot a brace of birds in the squire's park. The gamekeeper said, "I shall put a stop to that." But the youth dashed away with an exclamation of defiance. The squire has command of the whole colony, and called on the youth to answer for his offence, but he listened not to his interrogations. There was a greatly exaggerated paragraph in the paper about it. 5— S G I N P A N S Y B U R G L A R S I N G A P O R E H A R P O O N S C O T T A R C E 7—Scott—Old Mortality. 8—There are moments when silence pro- longed and unbroken, More expressive may be than words that are spoken.

Names of Those Who Sent Correct Answers to November Puzzles.

Christina Hadcock, Byron G. Bowerman, Wm. S. Howell, Ada Armand, Amelia E. Walker, Georgina Smith, Will Thirlwall, Thomas Armstrong, Eva Henderson, Minnie E. Weldon, Alice Hume, Mary Marshall, James Paterson, Wm. B. Bell, Henry Reeve, Martha Hodick, Mary McArthur, A. J. Taylor, Sarah E. Miller, Eva E. Kelly, Teiny Docker, Peter Lamb, John C. Houseman, Mamie McCallum, Edmund Pepper, James Watson, Adelaide Manning, Annie B. S. Scott, Sarah M. Brett, Maggie F. Elliott, Robert J. Risk, Addie Davidson, Robt. Kerr, Lottie A. Sewell, Lottie Boss, Robert Wilson, Ann J. Phoenix, C. Gertie Heek, Harry Woodworth, Esther Louisa Ryan, Chas. Herbert Foster, Jessie M. Fox, W. L. Sissons, Sara Warren, Camilla Warren, Clara McLean.

Little Ones' Column.

Christmas at Grandmamma's.

Fanny came running into the sitting-rooms saying, "A letter from grandpa, and just guess what she writes, Allie?" "Well, what does she write?" asked Allie, looking up from her macrame board. "Write, well, you'll never guess, but it's just splendid," said Fanny knowingly nodding her wise little head. "I think you might read the letter aloud so we all could hear the good news that seems to please you so much," said Gracie. "Well, girls, just think, dear old grandpa wants us all to come down East and spend Christmas with grandpa and her, for she says it would make her very happy to see our bright happy faces, as it would remind her of the days when aunt Fanny and Sadie, uncle Ben and uncle Charles were children. And then, too, she says there is excellent sleighing, such as you city girls never saw." "I think it will be splendid," said Fannie, all excited. Just then mother entered the room and the girls all asked at once, "Mamma, do you think papa will take us?" "Yes, for only a few days ago we spoke about a visit to grandpa's, and I don't doubt that he will agree with us that it will be glorious to spend Christmas down East." This was too much for the girls, and they all began talking at once, what they would make, and how they would enjoy a visit down East in midwinter. True, they usually spent their summer with grandpa, but Christmas they had always been at home in the city. Allie said she would knit enough macrame to go around a stand which she remembered stood in a corner of grandpa's sitting room. "There, I know what I shall do; I will buy enough fawn colored cashmere and feather-stitch a hem all round, that will be nice to throw across grandpa's shoulders, when she is at tea." "Oh, dear, the girls all know how to make nice things for presents, but I can't make anything," said little Gracie, who was the youngest of the sisters and had as yet only gone to the Kindergarten school. "Why, you just make her some of those funny little clay figures, like those you brought home the other day, and you had better make a lot of them so that grandpa can claim some of them, for I know they will laugh to see

what funny things little Gracie can make out of nothing but pure clay."

"Grandpa!" shouted the other girls. "Oh, what will I make for him?" they both asked at once.

"Well, as you have decided what to make for grandma, I should advise you both to finish that first, and by that time you will think of something for grandpa," said mamma.

At the time grandma wrote the letter, whose arrival we have just heard of, she wrote more, one of which arrived in Florida, for one of grandma's drughters lived there. She was the mother of three lively, wide-awake boys, one of whom had never spent a winter at grandma's. When their mother told them of the invitation from grandma they were delighted.

Frank, the eldest, declared that it would be glorious to go North and have jolly times sleighing, and then he told Chick and Clarence about the fun he had two winters before while out skating, and promised to teach them how to skate.

It was decided that the family should leave Jacksonville two weeks before Christmas, go to New York per steamer, and then buy some heavy clothing, and Frank suggested fur caps and mittens, and long warm comfortables to wrap around the neck, so long that we can wrap them up high to our ears, for it's awful cold up there. Chick and Clarence looked upon him as a prodigy, and asked him all kinds of questions.

The boys decided they would gather some of the finest oranges in the groves, and papa promised to pack them very carefully. As each of the boys had a row of trees, they carefully gathered those they thought best. During the fall Clarence and Chick had gathered a lot of pecan nuts, which they concluded would be a treat, so they put a bag full of them in the bottom of the barrel, where their papa was to put the oranges.

Clarence, who had an eye for the beautiful, said he would gather some nice fresh moss, as his mamma had told him that the trees in the North were not festooned with grey moss as they are in Florida, and he said it would be so nice to trim the dining room with.

Frank happened to think of some briarwood roots he had gathered, and selected some of the finest to take to grandpa to make pipes out of. So they filled the barrel and had it all ready to send to grandma's.

The winter being mild, they did not see any snow when they arrived in New York.

The day they arrived at Stockton their anticipations were realized, for the day previous there had been a snow storm. On every side stretched the angular fields covered with a mantle of pure white snow which glistened and sparkled as the sun shone on it.

Clarence was so surprised that he could hardly speak first. Soon he exclaimed: "Oh, isn't it beautiful, how very clean it looks; does it always look that way? How long did it take to snow so much as this? Oh, just see how lovely those trees look, they look lovelier than our trees do, when they are filled with moss." At this point they heard the sound of sleigh bells, and ere long mamma recognized uncle Ben, who after shaking hands all round, said to the boys to jump in and tucked up the robe snug around, for it would be a cold ride for the little fellows

who never have such cold weather at home. The boys declared they were not cold and thought it the best fun they had ever had.

When they reached the house grandpa and grandma greeted them with a hearty welcome, and the boys soon felt quite at home in the strange house, with its small windows, high open fire places, and as to grandpa and grandma, they were delighted to hear the noise and bustle the boys made.

In a few days their cousins, Fanny, Allie and Gracie, came, then there was any amount of noise.

The third letter that grandma had written was sent to uncle Charles in Colorado, and the day before Christmas he and his family arrived, but his family consisted of two cunning little twin babies who could only crow and smile at them all.

Christmas eve it was decided that everybody should wrap their respective presents in packages and mark the name of the recipient and donor on it, and place it on the dining-room table.

The children were sent to bed early and Ben brought up a large pine tree and placed it in the middle of the room, and spent many hours in trimming the tree with candies, nuts, ornaments and candles. Then the packages were brought in and placed in piles under the tree.

In the morning the blinds were kept closed and the door locked. As soon as breakfast was over, the bell rang loudly and the children were told that all was ready. They formed a line, the smaller ones coming first and marched into the room. How they laughed, and what a confusion there was, how they all admired the tree, and then what fun it was to find packages marked with their respective names on them.

All shared well, and grandma and grandpa were delighted with their presents, and declared it was as happy a Christmas as they had ever spent.

You may be sure there was a fine dinner in that grand old farm house that day, and all declared it was a splendid idea for grandma to have them all together on that day of days.

Man.

Man that is born of woman is small potatoes and few in the hill.

He riseth up to-day and flourisheth like a rag-weed, and to-morrow or the day after the undertaker has him in the ice-box.

He-goeth forth in the morning warbling like a lark, and is knocked out in one round and two seconds.

In the midst of life he is in debt, and the tax collector pursueth him wherever he goeth.

The banister of life is full of splinters, and he slideth down it with considerable rapidity.

He walketh forth in the bright sunlight to absorb ozone, and meeteth the bank teller with a sight draft for \$357.

He cometh home at eventide and meeteth the wheelbarrow in his path, and the wheelbarrow riseth up and smiteth him to the earth, and falleth upon him and runneth one of its legs into his ear.

In the gentle spring-time he putteth on his summer clothes, and a blizzard striketh him far away from home, and filleth him with woe and rheumatism.

He layeth up riches in the bank, and the presidentspeculateth in margins, and then goeth to Canada for his health.

In the autumn he putteth on his winter trousers, and a wasp that abideth in them filleth him full of intense excitement.

He starteth down cellar with an oleander, and goeth first hastily, and the oleander cometh after him and sitteth upon him.

He sitteth up all night to get the returns from Ohio, and in the end learneth that the other fellows have carried it.

He buyeth a watch-dog, and when he cometh home late from lodge the watch-dog treeth him and sitteth beneath him until rosy morn.

He goeth to the horse trot and betteth his money on the brown mare, and the bay gelding with the blaze face winneth.

He marrieth a red-haired heires with a wart on her nose, and the next day her parental ancestor goeth under, with few assets and great liabilities, and cometh home to live with his beloved son-in-law.—[Puck.

Notices.

In our November dairy article connected with our illustration, the word "Runter" should have read "Truckle Cheese"—a term used by dairymen to mean common cheese made in the form of Stilton.

"Forest Leaves," by Mr. W. W. Johnson, Snowflake, Mich. This catalogue on the propagation and management of trees for forest and ornamental planting, contains a description of the best varieties and a number of handsome plants illustrated in colors. The second edition is the latest work on the subject.

We have received an able and handsomely executed work entitled "How the Farm Pays," published by Peter Henderson & Co., New York. The authors are practical men in their respective departments, and the writings are chiefly based on their experience. The work embraces all the departments of agriculture, including live stock and dairying, and describes the latest and most reliable methods. See advt.

We have just received a calendar of the Ontario Ladies' College, Whitby. A single glance at the Faculty and courses of study will explain the increasing popularity of this institution. The buildings and grounds are considered among the finest of the kind in Canada. The special aim of the directors is to provide for young ladies a pleasant home and a liberal education. Parents thinking of sending daughters after Xmas, should make application to the Pricipal, the Rev. J. J. Hare, M. A.

MUSICAL.—The Knabe Piano, which has such a wide popularity, is considered by many experts to be superior in every way to any other piano in the world. The success of this piano has only been attained by years of careful study, and the Knabe, with its excellent singing qualities, its great power, the elasticity of touch, and superior workmanship, is justly the favorite. Herr Faelten's piano solos at the recent Worcester festival, the Schumann's concerto, in A minor, op. 54 and Liszt's Rhapsodie No. 4, which was so highly praised, were both performed upon a Kabe Piano, Herr Faelten pronouncing it to be the best piano he had ever seen.—[Boston Evening Traveller.

(Continued on page 373.)

OUR USEFUL PREMIUMS for 1885.

For One New Subscriber:

YOUR CHOICE OF THE FOLLOWING

Trees especially adapted to the Northwest.

The Crab Apple—Two plants by mail, of what is said by Mr. Leslie to be the best in the world. These useful and valuable trees should be planted by all farmers, particularly in the Northwest.

The Ash Leaf Maple—One packet of seed or six plants of this ornamental and hardy tree. For description and illustration see page 297 of October number.

The Silver Poplar—one packet of cuttings or six plants. This tree is of very rapid growth and when dry makes good fire wood. See articles on page 297, October number.

The Norway Maple—One packet of seed or six plants of this beautiful and hardy variety of the maple, a description of which appears on page 297, October number.

Adapted to Southern Ontario.

The Horse Chestnut is one of the most beautiful and useful trees grown, of very rapid growth, and for shade or ornament cannot be excelled. One packet of seed from a grand tree owned by the proprietor of this journal, and can be seen from the study window, see page 264 of September issue; or six young plants.

The Black Walnut—Of all timber for making furniture or other useful purposes this is considered the most valuable, and is now very scarce. This excellent timber will pay for cultivation. One package of seed from trees growing on the old homestead of the editor of this paper, or six young trees.

—OR THE—

CHROMOS

Chromo "Life's Voyage."—Or Lithograph "Yes or No." Beautiful pictures, and highly prized by those who have received them.

SEEDS.

A useful collection of **Vegetable Seeds**, ten varieties, and one packet novelties for 1885.

A choice collection of **Flower Seeds**, ten varieties.

STRAWBERRY PLANTS.

Two plants, **Prince of Berries**, said to be the latest and best of the many excellent varieties, and is of the finest flavor lately introduced.

Two plants, **Daniel Boone**.—This plant has grown in favor greatly during the past season, and bids fair to be in great demand, both as to flavor, productiveness and keeping qualities.

Three plants of **James Vick Strawberry**.—In addition to the already favorable opinions expressed about this berry, it has this season averaged fully as large berries as the Wilson, and produced more fruit. One large grower states that he could fill a basket sooner from the James Vick than from any other strawberry.

Two plants of the **Dwarf Juneberry**.—These plants should be in every garden. The plant is very hardy. The fruit ripens early, and in enormous quantities.

Six plants of the **Russian Mulberry**.—The popularity of this plant still continues, and we have decided to give it again for another year.

ROSES.

So very few really good roses are to be found in the country gardens of Canada that we have decided to offer two of the best varieties grown, one a dark crimson and the other a deep yellow. The ordinary price for these roses if bought from florists is 50 cts. to \$1, but we offer your choice of either of the following for one new subscriber:

One plant of the **General Jacqueminot**.—This rose is one of the finest and prettiest; in color it is a rich velvety scarlet, changing to brilliant crimson. The buds of this variety are magnificent, rendering them of especial value for bouquets, and for wearing in the button hole. It is also a good rose for forcing. See issue for April, 1884.

One plant of the **Isabella Sprunt**.—In color is sulphur-yellow. It is a very free bloomer, and is one of the most beautiful of the yellow roses, and in the bud state can scarcely be surpassed. It is of especial value for bouquets, and makes an excellent potting plant.

The **Lady's Manual of Fancy Work**.—Four hundred illustrations, paper cover, containing a great variety of excellent designs for dress or household decorations. It is a book which will please, and should be in the hands of every lady.

For Two New Subscribers:

YOUR CHOICE OF THE FOLLOWING

Large and beautifully finished

CHROMOS

"Windsor Castle," or "Balmoral Castle."—These fine pictures are 30x24 inches, and form a pretty ornament to any home.

Or Lithograph of **Lorne and Louise**. The picture contains a puzzle which few are able to solve.

The **Novelty Rug Machine**.—Makes rugs, tidies, door mats, etc. Is an entirely new invention. Performs its work satisfactorily, is simple of construction, and can

be worked by a child. This little machine not only saves much time and labor, but much of the material used by the use of the ordinary mat hooks. For making Turkish rugs it cannot be excelled. Every housekeeper should have one. See page 307 of October issue.

For Three New Subscribers:

YOUR CHOICE OF THE FOLLOWING:

The World's Cyclopedia and Library of Useful Knowledge.—Giving concise information on nearly every subject. Contains 800 pages, 50,000 references, and 1,200 illustrations, and is an indispensable library of universal knowledge.

The White Mountain Apple Parer.—This machine does its work economically and quickly, leaving the fruit ready for drying, &c. This parer is the best and most serviceable one which we know of, and can strongly recommend it to every person. Per express at receiver's charges.

The White Mountain Potato Parer—is said to be not only the best one made, but the only one manufactured which will pare a potato better than it can be done by hand, taking off a thinner paring from every shape or kind of potato, but will go into and clean out the eyes. Per express at receiver's charges.

The "Household" Special Premium, the new **American Dictionary**.—Contains 1,000 engravings, and more pages than any similar work. No house should be without one.

OUR RULES.

Each new name must be accompanied with \$1 for the annual subscription.

The premium is for the person who secures the new name, and does not in any way belong to the new subscriber.

All plants, seeds, &c., will be sent free by mail early next spring. Books, chromos, &c., will be mailed free as early as possible after receipt of name. The apple and potato parers will be forwarded by express at cost of receiver.

Send for sample and commence your canvas at once. Sample copies sent free.

Address.

The FARMER'S ADVOCATE, London, Ont.

Notices.

(Continued from page 372.)

The attention of our readers is called to the seed advertisement of James J. H. Gregory, Marblehead, Mass. His catalogue is sent free.

The attention of our readers is directed to the advertisement of the Correspondence Business School at Buffalo, N. Y., which has been established for securing a practical education, particularly for those young people who cannot leave home. To all so situated, "the school will go to them." The principal, M. J. C. Bryant, will have pleasure in forwarding prospectuses to applicants.

When the Mason & Hamlin Company announced the accomplishment of a great improvement in Upright Pianos, which they would soon give to the public, much was expected, because of the vast improvements which had been effected by them in reed instruments, and the acknowledged superexcellence of their organs. These expectations are fully justified by the pianos they are producing, which have extraordinary purity and refinement of tone. Every mechanic will see that the peculiarities of their construction must add greatly to their durability and especially their capacity to keep in good tone. This company have as great a future in their pianos as they already realizing in their organs, which are unequalled among such instruments. —[Boston Traveller.

Commercial.

THE FARMER'S ADVOCATE OFFICE,
London, Ont., Dec. 1, 1884.

The general quiet tone which has pervaded all lines of trade, still continues, and notwithstanding the very bountiful harvest the movement of produce is light. The railways are complaining bitterly of decreased earnings and are cutting down expenses in every way by reducing their staff and by a reduction of wages of employes. For some of this decreased earnings the railway people have themselves to blame. They have been carrying freight through from the West to the seaboard at rates that do not pay working expenses. To meet this they are reducing wages and putting up local rates, so that we in Ontario are no better off, and at times not as well as regards rates to the seaboard, as those farmers living 100 miles west of Chicago. We think the time is coming when the country will demand legislation on this and sundry other railway questions.

WHEAT.

Prices for this article are in very much the same position they have been for the past three months. The United States Commissioner of Agriculture in his annual report says:

"The wheat area is so much beyond the requirements of consumption of this and other countries as to depress the price to a point unprecedented in recent years, favoring at certain points the use of wheat in feeding for pork production. The cause of this superabundance is two fold—first, extension of settlement in the Northwestern prairies and dry plains of the Pacific coast; and second, the extraordinary period of comparative failure of European wheat for several consecutive years. The progress of settlement must be less rapid hereafter; and already the lean years of Europe have been followed by comparative plenty. These facts of products and prices point to the sharp necessity of adapting production to consumption to supply the food products now imported, to give remunerative employment to agricultural labor, and food in variety and cheapness to consumers."

The London Miller thinks England is within a measurable distance of the momentous fact of the giving up of wheat growing, and is alarmed for the milling industry through the large importation of American and even Australian flour, the latter coming through the tropics without injury. In Ireland the wheat area has decreased 25 per cent. in a single year.

The following from the Monetary Times will illustrate the feeling among farmers:

"A farmer in Chatham, who had a good crop of wheat, was offered the other day 72 cents per bushel for it. He indignantly refused such a low price, and declared he could afford to keep it. Shortly afterwards, after confessing that his corn was a poor crop, he said he must buy some to fatten his hogs. When told the price, which was in exact ratio with that just named for wheat, his inconsistent answer was: "Too high, too high; can't afford any such price—I would rather feed my wheat to the pigs." Strange, illogical selfishness. So stubbornly resolved was he that wheat ought

to be a dollar the bushel, that he would have been more content with 400 bushels at \$400 than with 600 bushels off the same land at \$432, which was the offer he got. Nor did it matter, to his unthinking mind, that his seventy-two cents had a greater purchasing power to-day than last year—that it would buy him more sugar, cotton, or clothing than the same money last year, and that therefore he was relatively better off."

Of course the farmer has a perfect right to sell or hold his wheat just as he thinks best; but there are many cases, and we need not go far to find them, where farmers hold back their produce when prices do not suit them.

CATTLE AND SHEEP.

The shipping season, via Montreal, closed last week. The shipments of cattle via that port show a considerable increase, but a very large falling off in the number of sheep. This is due largely to the fact that Great Britain has been supplied with frozen mutton from New Zealand. The total exports of cattle this season are 57,100 head, an increase of 6,735 head over 1883. The total exports of sheep this season are 57,084, a decrease of 43,751 head compared with 1883.

The following were the exports of live stock from Montreal during the week ending November 22, with comparisons as given by the Montreal Gazette, Nov. 24th.

Per	To	Cattle	Sheep
Lake Winnipeg	Liverpool	228	1,615
Ontario	Liverpool	13	790
Siberian	Glasgow	505	476
Norwegian	Glasgow	287	491
Total		1,031	3,372
Last week		839	2,523
Cor. week 1883		631	2,442
Cor. week 1882		231	1,410
Cor. week 1881		429	853
Total to date		57,100	59,084
To same date 1883		50,365	102,835
To same date 1882		42,392	76,053
To same date 1881		49,397	61,140

The week's shipments were distributed as follows:—

To	Cattle	Sheep
Liverpool	239	2,400
Glasgow	792	967

The Lake Winnipeg took out \$60 quarters beef, making the total shipments for the season 16,622 quarters.

The receipts of Canadians and Americans at the principal ports since this day week have been light, while the general supplies from all sources have been fair, but considerably less than last week. At Liverpool to-day the offerings were fair, but under a steady and most active demand a good clearance was effected at an advance of half a cent per pound as compared with a week ago, the market being firm at the advance. Prime Canadian steers had a good sale at 15c, against 14½c last week, 14 two weeks ago, 14½c three weeks ago, and 13½ four weeks ago—a gain of 1½c per lb. within the last month. Other grades have responded, sales being made to-day at 14½c for fair to choice, 13½c for poor to medium, and 10½c @ 12c for inferior and bulls. A similar advance is cabled from London, but in Glasgow the improvement is not so noticeable. The sheep trade has taken a decided upturn, chiefly because former heavy supplies have been worked off and prices have advanced 1c per pound as

compared with a week ago. At Liverpool to-day the offerings were light and the market firm at the advance. Best sheep went at 15c against 14c last week, 14c two weeks ago, and 15c three weeks ago. Secondary qualities sold at 13c @ 14c; merinoes at 12½c @ 13½c, and inferior and rams at 10c @ 11½c. Dressed beef in Liverpool is cabled ½d higher at 5½d.

PORK.

The movement of dressed hogs has been light. In Chicago the movement has been fairly active, but the feeling was somewhat unsettled. The United States have gathered in a large corn crop, and in the natural course of events this large corn crop will find its way largely to the hogs, or the hogs will find their way to the corn. These two factors (hogs and corn), must meet in the shape of converting corn into hogs, and in due course of time we may expect to see an increase in the numbers and size of hogs. With pork at five and six dollars, farmers will have no reason to complain when compared with the price of other kinds of produce.

APPLES.

The market for apples in London and other English ports has been fairly active, and prices are steady. A London circular under date of Nov. 13th, says:—

"The SS. Barcelona landed some 1,600 barrels fine Canadian apples at this port, which, together with some 2,000 barrels States apples shipped at through rate via Liverpool to London, passed off yesterday with active demand at subjoined quotations:—Canadians—Baldwins, 17s per barrel; greenings, 14s@14s6d do; N. spy, 14s 6d@15s do; kings, 18s 6d do; fameuse, 13s 6d@17s do; cabashaw, 13s do; rox. russets, 14s 6d do; golden russets, 21s; various, 11s 6d@17s 6d do; ribston pippins, 22s do. States—Baldwins, 14s@16s do; greenings, 13s@14s 6d do; N. spy, 13s@14s do; Spitz, 13s 6d@14s 6d do; teeks, 14s 6d@15s 6d do; various, 10s@15s do; Newtown pippins, 34s@37s do.

To-day's advices from Liverpool report a sensible decline in the values of all kinds of apples, in sympathy with the unusually heavy arrivals this week. At public sales yesterday: Canadian in great variety sold at 9s@20s 6d per barrel; States do. at 8s 6d@9s 6d; Newtown pippins at 18s@15s. Ribston pippins realized from a dollar to a dollar and a half more per barrel than any other variety.

BUTTER.

Is very quiet and trade confined to local wants.

CHEESE.

The season is now about over and the dairyman has every reason to feel satisfied with the season's returns in this now very important branch of Canadian industry. When it is remembered that over 1,000,000 boxes of cheese have been shipped via Montreal this season, we think our readers will agree with us that cheese making is assuming a very important

factor of our productions. A few figures will show anyone the money this amount of cheese brings into the country. The fact is that for those who have the taste and help there is no better paying business than dairying and stock raising. There is less serious fluctuations in these products than in anything else.

PRICES AT FARMERS' WAGONS, TORONTO.

	Dec. 1st, 1884.
Wheat, fall, per bushel	70 71 to 0 74
Wheat, spring, do.	0 71 0 74
Wheat, goose, do.	0 16 0 37
Barley, do.	0 53 0 70
Oats, do.	0 32 0 33
Peas, do.	0 56 0 75
Eye, do.	0 56 0 00
Beans, do.	1 00 1 28
Dressed hogs, per 100 lbs.	5 75 6 00
Onickens, per pair	0 30 0 50
Ducks, do.	0 60 0 75
Butter, pound rolls	0 22 0 34
Butter, large rolls	0 17 0 21
Turkeys	0 75 2 00
Geese	0 50 0 80
Cheese	0 12 0 15
Eggs, fresh, per dozen	0 22 0 24
Potatoes, per bag	0 40 0 45
Apples, per bbl.	0 50 1 75
Cabbage, per dozen	0 25 0 30
Turnips, per bag	0 25 0 30
Carrots, per bag	0 30 0 40
Beets, per bag	0 50 0 75
Paranips, per peck	0 15 0 20
Hay, per ton	9 00 14 00
Straw, do.	6 00 9 00

BRITISH MARKETS BY WIRE.

Cattle Market Stronger—Sheep Unchanged

LIVERPOOL, Nov. 24th, 1884.

CATTLE.

The cattle market was active and stronger. Offerings of Canadian and States cattle light, and the general supply only fairly large. Prices ½c higher than last week.

	Cents @ lb.
Choice steers	15 ½
Good steers	15
Medium steers	14
Inferior and bulls	7 ½ @ 8 ½

SHEEP.

The sheep market is nominally steady at former rates.

	Cents @ lb.
Best long woolled	13 ½
Seconds	12 @ 13
Merinos	11 @ 12
Inferior and rams	6 @ 7

(These prices are for estimated dead weight; offal is not reckoned.)

LIVE STOCK MARKET.

East Buffalo, N. Y.

Nov. 29.—Receipts—Cattle, 2,295; hogs, 6,555; sheep, 2,200. Shipments—Cattle, 2,091; hogs, 7,475; sheep, 4,400.

Cattle—Demand fair; about all changed hands; good 1,400 to 1,500 lb. steers went at \$6 25; do, 1,200 to 1,400 lbs. at \$5 25 to \$5 45; stockers of 720 to 800 lbs., \$5 30 to \$3 40; 1,160 lb. butchers' steers, \$4 50; market closed fair, with a steady feeling.

Sheep and lambs—Demand very light; sales at \$4 60 to \$4 75 for fair Canada lambs, and a few choice, 100 lbs. at \$4 85; good Western sheep at \$3 12 ½; fair at \$3 20; feeling is only fair, and the prospects are unfavorable.

Hogs—Demand fair, and prices are steady; good to best York weights at \$4 30 to \$4 35; best offerings of closely selected at \$4; mediums and butchers' at \$4 35 to \$4 40; half-fat mediums and heavy at \$4 to 4 25; rough and ends of lots at \$3 60 to \$3 75; stags at \$4 75 to \$4; pigs, if fat, at \$4 20 to \$4 30; prospects are fair.

CHEESE MARKETS.

UTICA, N. Y.

Dec. 1.—There were 2,900 boxes of cheese sold at prices ranging from 10c to 12c, the bulk at 11c; 150 consigned; demand good.

LITTLE FALLS.

Dec. 1.—There were 3,750 boxes of cheese sold at prices ranging from 10½c to 11½c, the bulk at 11c; 340 consigned; 720 boxes of farm dairy sold at 10c to 12c; 77 lbs. kages of butter at 20c to 23c.



SEED Warranted to Grow.

or order mailed gratis. I have sold vegetable and flower seed to over a million farmers and gardeners in the United States, perhaps some are your neighbors, if so ask them whether they are reliable. Mr. Thomas Henshall of Troy, Kansas, writes me: "For 26 years I have dealt with you. I have lived in Iowa, Missouri, Colorado, and Kansas, and no matter what the soil or climate, the result was always the same, to wit—religiously honest and good." This is the kind of seed I raise and sell. Besides dealing in all the standard varieties, I carefully test every year hundreds of new vegetables and catalogue the few that prove to be really desirable. The Hubbard and Marblehead Squash, Marblehead Corn, Marblehead Cabbage, Ohio Potato, Ellipse Beet, all of which I was the original producer, are some of them. My Catalogue for 1885, sent free to all.

JAMES J. H. GREGORY, (Seed Grower), Marblehead, Mass.

NEW ADVERTISEMENTS.

ADVERTISING RATES.

The regular rate for ordinary advertisements is 25c. per line, or \$3 per inch, nonpariel, and special contracts for definite time and space made on application

Advertisements unaccompanied by specific instruction inserted until ordered out, and charged at regular rates. The FARMER'S ADVOCATE is the unrivalled advertising medium to reach the farmers of Canada, exceeding in circulation the combined issues of all the other agricultural publications in the Dominion. Send for advertising circular and an estimate.

SPECIAL NOTICE.

THE FARMER'S ADVOCATE refuses hundreds of dollars offered for advertisements suspected of being of a swindling character. Nevertheless we cannot undertake to relieve our readers from the need of exercising common prudence on their own behalf. They must judge for themselves whether the goods advertised can in the nature of things be furnished for the price asked. They will find it a good rule to be careful about extraordinary bargains, and they can always find safety in doubtful cases by paying for goods only upon their delivery.

SALE OF PURE BRED

Ayrshire Cattle

DECEMBER 10th, 1884,

HERD NUMBERING 28 HEAD

Including the noted prize winner "Garfield" and the imported bull "Stoncalsey."

E. W. WARE, HAMILTON, ONT.

SHOW CATTLE

AUCTION

DALMORE FARM, ASHBURN, DEC. 19, 1884

THE PROPERTY OF WM. HERON & SON.

AT the above time and place there will be sold THIRTY HEAD OF SHORTHORNS, consisting of 20 cows and heifers, and 10 bulls and bull calves, including some fine specimens of the breed, from such eminent breeders as Messrs Campbell, of "Kinellar," Cruickshanks, of "Sittytown," Linton, of "Sheriff Hutson," and others, including a number of really choice Show Cattle.

Dalmore Farm is situated two miles from Myrtle, a station on the C. P. R. and G. T. R.'s, 30 miles east of Toronto.

Teams will be in attendance at all trains evening previous and day of sale.

W. C. HERON, ASHBURN P. O., or L. FAIRBANKS, Auctioneer.

ANNUAL AUCTION SALE

PURE BRED SHORTHORN CATTLE

Under the auspices of the BRITISH-AMERICAN SHORTHORN ASSOCIATION.

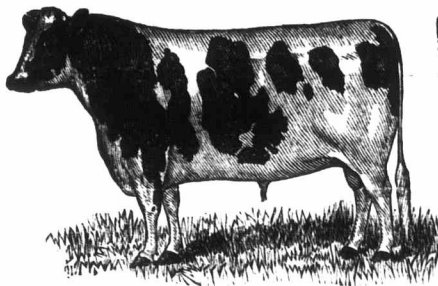
A large number of valuable cattle will be offered at the above sale, which will be held in

TORONTO, ON WEDNESDAY, FEBRUARY 25th, 1885

Rules of sale similar to last year. No reserve bid other than catalogue price. For further information apply to

R. L. DENISON, Secretary, 84 King St. East, TORONTO.

HOLSTEINS FOR SALE



"BARRINGTON," No. 278 N. H. B.; No. 2103 H. H. B.; Out of Hamming, with Milk Record of 99 Pounds in Single Day.

WE now have in quarantine, at Quebec, an importation of over 60 head of Holsteins, which will be released Dec. 29th. This herd consists of

COWS, YEARLINGS AND CALVES

and has many prize animals from this year's great International Exhibition at Amsterdam, including the cow that won first prize of \$160 and bronze medal as giving the best quality of milk for cows giving over 40 pounds per day; also the cow with her gold medal won at Schagen in 1881. The cows of this importation have milk records from 65 pounds per day as 3-year-olds to 92 1/2 pounds as mature cows, and the ancestors of the young stock have equally good records. Wishing to give our Canadian friends and patrons the benefit of our personal selection of first-class Holstein Stock without the necessity of a second quarantine, we, with great difficulty, succeeded in obtaining transportation to Quebec, and feel confident that they will in return embrace the present desirable opportunity of securing them before quarantine expires, as all not then disposed of will be removed to the Sinclairville Stock Farm.

B. B. LORD & SON, Sinclairville, Chaut. Co., N. Y.

GREAT SOUTHWEST

Cattle Ranches, Grain Farms and Splendid Business Locations are Found in Arkansas and Texas.

THE GREAT MISSOURI PACIFIC RAILWAY

has inaugurated a SERIES OF CHEAP LANDSEEKERS EXCURSIONS TO ARKANSAS AND TEXAS, leaving St. Louis TWICE EACH MONTH.

THE TRAINS are special and made up of splendid Day Coaches, a Pullman Palace Car, and the new and comfortable Land Seekers' Excursion Sleeping Cars free to all.

THE RATES are made so low that all can afford to join one of these popular excursions.

LEAVING on WEDNESDAY, NOV. 19th. Make all your arrangements to reach St. Louis on that date. The other excursions will follow every two weeks.

CATTLE men are specially wanted to examine the splendid grazing lands now offered at a low rate on ten to twenty years time, with interest at five per cent. These lands cost only \$1.25 to \$2.00 per acre, and have no equal on this continent.

WOOL GROWERS will find that Texas is the sheep parlor of America. We can show you the finest climate, the purest air and as good water as you ever saw, and that too on land for sale at only nominal prices.

BUSINESS LOCATIONS are waiting for merchants, mechanics, and all classes of business men. We want you to fill some of the innumerable good openings we can show you.

LABORING MEN can work the entire year at remunerative wages. Arkansas and Texas offer you the best field in the world, with no frigid winters to contend with.

PLEASURE SEEKERS will enjoy a delightful trip, gain a comprehensive idea of the great Southwest, and be most hospitably entertained by the citizens of the towns along the lines of the Missouri Pacific Railway in Arkansas and Texas.

CAPITALISTS will find that nowhere in the United States are there so great inducements offered for investment as in Arkansas and Texas.

CALIFORNIA EXCURSIONS

are run the first Thursday of each month to Los Angeles and San Francisco for \$53.50. They are the great popular excursions to the Pacific Coast.

For further and full information address

JOE. E. ENNIS, Passenger and Land Agent, 109 Clark St., Chicago, Ill.

GEO. OLDS, General Traffic Manager, St. Louis, Mo.

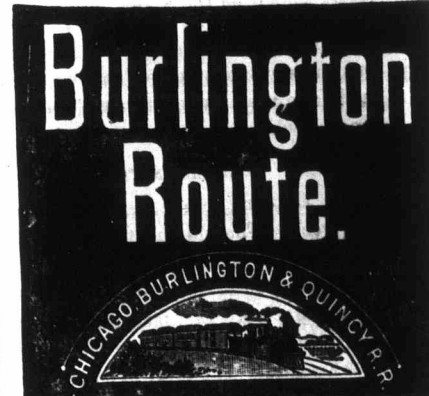
H. C. Townsend, Gen. Pass. & Ticket Agt., St. Louis.

Trees! Trees!! Trees!!!

AN IMMENSE STOCK!

1,000,000 Russian Mulberry. 50,000 Dwarf Juneberry. 50,000 Russian Apricot. And a general variety of other nursery stock. A paper one year free to those who buy \$1 worth of trees. Send for price list. Address CARPENTER & GAGE, Bower, Jefferson Co., Nebraska, U. S. A.

THE LINE SELECTED BY THE U. S. GOV'T TO CARRY THE FAST MAIL



GOING WEST.

ONLY LINE RUNNING TWO THROUGH TRAINS DAILY FROM CHICAGO, PEORIA & ST. LOUIS,

Through the Heart of the Continent by way of Pacific Junction or Omaha to DENVER,

or via Kansas City and Atchison to Denver, connecting in Union Depots at Kansas City, Atchison, Omaha and Denver with through trains for

SAN FRANCISCO, and all points in the Far West. Shortest Line to KANSAS CITY,

And all points in the South-West. TOURISTS AND HEALTH-SEEKERS

Should not forget the fact that Round Trip tickets at reduced rates can be purchased via this Great Through Line, to all the Health and Pleasure Resorts of the West and South-West, including the Mountains of COLORADO, the Valley of the Yosemite, the

CITY OF MEXICO, and all points in the Mexican Republic. HOME-SEEKERS

Should also remember that this line leads direct to the heart of the Government and Railroad Lands in Nebraska, Kansas, Texas, Colorado and Washington Territory.

It is known as the GREAT THROUGH CAR LINE of America, and is universally admitted to be the Finest Equipped Railroad in the World for all classes of Travel.

Through Tickets via this line for sale at all Railroad Coupon Ticket Offices in the United States and Canada.

T. J. POTTER, Vice Pres. and Gen. Manager. PERCEVAL LOWELL, Gen. Pass. Agt. Chicago.

JNO. Q. A. BEAN, Gen. Eastern Agt., 47 Broadway, New York, and 306 Washington St., Boston.

"CRASH!"

Until further notice is given, A. B. POWELL & Co.

will sell the following goods at the prices given below, viz:

Pure Wool Grey Chambray Flannels at 25c. per yard.

Canadian Wool Bed Blankets, all to be sold by the pound, at 45c. per lb.

Canadian Yarn, all colors, at 50c. " Fingering Wool Yarn, at 75c. "

All \$1.15 Col'd Silks reduced to 75c. per yd. All \$1.25 Colored Duchess Dress 95c. "

Satins reduced to 25c. " Dress Plushes, Dress Velvets, Broche Mantle Silks and Velvets, all to be sold at a small advance on cost.

N.B.—Send for samples. Goods ordered by mail expressed without delay.

Kid Gloves in every shade and make. Prices from 25c. to \$3.00 per pair.

Don't forget our address. Write for what information you desire in the way of Dry Goods, &c.

A. B. POWELL & Co.

THE GREAT KID GLOVE HOUSE, 134 Dundas Street, LONDON, ONT.

Stock Notes.

We call the attention of our readers to the large stock sale of Messrs. Wm. Heron & Son, to take place this month. See advertisement.

Mr. T. C. Patteson, Eastwood, Ont., recently sold 40 ewes and 20 rams from his Shropshire herd. The prices were remunerative, and most of the purchasers were from the States.

Has Canada reason to be proud of the laurels won at the Chicago Fat Stock show? She carried off two-thirds of the prizes awarded for slaughtered carcasses, of which the Polled Angus won one-half.

Messrs. John and J. N. Cameron, proprietors of Prospect Hill Farm, New Glasgow, N. S., recently imported a fine herd of Holsteins, consisting of three yearling heifers, one heifer calf, and a bull, which were selected in North Holland by an experienced buyer.

The Shorthorn cow, Lady Lorne, owned by Mr. T. C. Patteson, Eastwood, Ont., and purchased at the sale of Mr. Richard Gibson, London, has dropped twin heifer calves, making a record of six heifer calves before her sixth birthday.

Last week Messrs. Geary Bros., London, Ont., shipped to Dallon, Montana, two car loads of stock, consisting of three imported yearling Clydesdale colts, six Canadian Clydesdale colts, nine Polled Angus cattle, six Shropshire and six Lincoln sheep.

Mr. Arthur Johnston, of Greenwood, Ont., writes us that his Shorthorns are doing nicely at Quebec. The importation the present year consisted of 12 Clyde stallions and fillies, and 21 Shorthorns. The Shorthorns were selected from the well known herds of Messrs. Campbell, of Kinellar; Wm. Duthie, of Collynie; A. Cruickshank, of Sittyton, and Nathaniel Reid, of Danestown—all of Aberdeenshire, Scotland. The lot is still in quarantine, and includes 8 young bulls and 12 heifers, mostly calves.

(Continued on page 378.)

ALMA COLLEGE, ST. THOMAS, ONT.—The growth and prosperity of this new institution for the higher education of young ladies is owing largely to the evident determination of the Board of Management and the Council of Instruction to give thorough instruction in every department of the school at the lowest possible rates. There can be no doubt, however, but that the beauty of the building and the excellence of the furnishings and domestic arrangements helped to attract its present large attendance. The school is largely patronized by all denominations, and by all classes of the community, and the perfect equality meted out to all has been an additional attraction to young ladies. The next term opens January 2nd, and any of our patrons who are interested can receive the elegant 40 p. p. announcement free by addressing Principle Austin.

I am highly pleased with your magazine, and think it is the best agricultural paper in Canada.
J. A.
KEETCH, Ont.

CORRESPONDENCE BUSINESS SCHOOL

451 MAIN ST., BUF. ALO, N. Y.
Thorough and Practical Instruction given in Book-keeping, Business Forms, Penmanship, Arithmetic, Short-hand, Etc., at home, by mail. Distance no objection. Terms moderate. Send stamp for Pamphlet. 228-c

J. McPHERSON ROSS, PORTRAIT PAINTER

Equity Chambers, Toronto.
Satisfactory and beautiful portraits painted from small photographs. Write for sizes and prices of pictures. Reference FARMER'S ADVOCATE. 227



—FOR—
Cistern & Well Pumps
Of every description, and for all purposes, address the
JAMES SMART
Manuf. Co.,
BROCKVILLE, ONT.

Lift and Force Pumps fitted complete with pipe and all appliances for WELLS of any depth a specialty. Inquiries, either direct or through regular dealers, solicited, and promptly and fully answered. 226-c&x

ENTERPRISE MANUFACTURING CO.,
Third and Dauphin Sts., Philadelphia, Pa.

ATTENTION FARMERS!

BEST IN THE WORLD!

NEW MEAT-CHOPPER

RAPID CLEAN

NO STRINGS OR SINEWS CAN PASS THROUGH UNCU.

FOR CHOPPING
Sausage-Meat, Mince-Meat, Hash, Hamburg Steak, Suet, Scapple, Lard, Fat, Chicken-Suet, Croquettes, Scrap-Left, Scrap-Left for Poultry, Etc.
VALUABLE COOK-BOOK, FREE, WITH EVERY CHOPPER.

CAPACITY.
No. 10 chops 1 lb. per minute, \$3.00.
" 12 " " " " 2.50.
" 22 " " " " 4.00.
" 32 " " " " 6.00.

FAMILY SIZE.
Price, \$3.00.

Send for Catalogue. MENTION THIS PAPER. Sold by all Hardware Dealers.

Tested and Endorsed by 100 Agricultural Journals.
Farm and Fireside, Oct. 1, says: "The test was made on a piece of the toughest beef to be found, and the result was that each editor immediately ordered an ENTERPRISE MACHINE for his family use, all agreeing that they would rather pay the price asked for that Machine than to carry any other home as a gift."

GET THE BEST.

MASON & HAMLIN

"MATCHLESS"—FRANZ LISZT—"UNRIVALLED"

ORGANS
AWARDED HIGHEST HONORS AT EVERY GREAT WORLD'S EXHIBITION FOR SEVENTEEN YEARS ONLY AMERICAN ORGAN AWARDED SUCH AT ANY 100 STYLES! \$22 to \$900 FOR CASH EASY PAYMENTS, OR RENTED. CATALOGUES & PRICE LISTS FREE.

UPRIGHT PIANOS
GREAT IMPROVEMENT PUREST, BEST MUSICAL TONES GREATEST ELEGANCE AND DURABILITY

"MUSICIANS GENERALLY REGARD THEM AS UNEQUALLED"—THEODORE THOMAS.

ORGANS AND PIANOS.

THE MASON & HAMLIN Co. BOSTON NEW YORK CHICAGO
154 TREMONT ST. 48 E. 14th ST. UNION ST. 147 WABASH AVE.

HOW THE FARM PAYS by William Crozier and Peter Henderson.
Just issued. A new work of 400 pages, containing 235 illustrations. Sent post-paid for \$2.50. Table of Contents mailed free. AGENTS WANTED. PETER HENDERSON & CO., 35 & 37 Cortlandt Street, New York.

Spencerian

BUSINESS COLLEGE,
Detroit, Mich., U. S. A.

YOUNG MEN of Canada desiring a knowledge of the modern methods of doing business in the States, or a start in business there, should attend this College. It is one of the largest and best on the continent, and is thorough and complete in every department.

SHORTHAND, PENMANSHIP and TELEGRAPHY Taught as Specialties.
Books, Board and Tuition for a Twelve Weeks Business Course Supplied by the College for \$96; the same for Twenty-four Weeks, \$155.

The actual Business Practice Course is unequalled. Five Departments are maintained. The Faculty is composed of nine competent and experienced instructors. Rooms are pleasant and elegantly furnished. College is located in the Board of Trade building, in the business centre of the city. There are no vacations, and students may enter at any time. Write for illustrated circular. Address
Mention Farmer's Advocate. 224-c

"SPENCERIAN" is the acknowledged American standard of Penmanship. One of its authors is associate proprietor of the Detroit College.



FARMERS
GIVE YOUR DAUGHTERS A
THOROUGH EDUCATION



ALMA
Ladies' College
ST. THOMAS, ONT.

The Finest Buildings and Furnishings for the Purpose in Canada.

Low Rates! Good Board! Thorough Work

The Staff consists of SEVENTEEN experienced thoroughly qualified teachers in

Literature, Languages,
Music, Fine Arts,
Commercial Training,
Domestic Economy.

Board, Room, Light, Laundry and Tuition cost in the Preparatory Department only \$38 per Term; \$42 in the Academic, and \$45 in the Collegiate.

The same with Music and Drawing, only \$190 a Year in advance.

Students may enter Jan. 2nd, 1885, Feb. 5th, or March 13th.

New 40 page announcement free.

Address— PRINCIPAL AUSTIN, B.D.
228

NIAGARA GRAPE VINES

A. M. Smith, of the Dominion Fruit Gardens, St. Catharines, Ont., is the only propagator of the Niagara Grape Vines for the Niagara Grape Co. in Canada, and he is authorized by the Company to dispose of a limited number of strong, two year old vines, to be delivered in the spring of 1885, for \$2.00 each.

All orders filled in rotation, and each vine will be under the seal of the Company. As the Company have never before sold unreservedly a vine or authorized its sale or propagation, any one offering it in any other way may be set down as a fraud.

Parties desiring to secure this valuable Grape, should apply at once to the undersigned,

A. M. SMITH, St. Catharines, Ont.

N. B.—A large assortment of other Grape Vines, small Fruits of all kinds, also Trees and Plants, for sale at the DOMINION FRUIT GARDENS, St. Catharines, Ont.

Send for Catalogue and Price List. 226-c



The NOVELTY RUG MACHINE

(PAT. MARCH 6th, 1882.)

Makes Rugs, Ties, Hoods, Mittens, Door Mats, &c.

with ease and rapidity. Price only one dollar. Single machines, with full directions, sent by mail on receipt of price. Agents wanted. Apply for circulars to R. W. Ross, P. O. Box 541. Sole Manufacturer, Guelph, Ont. Also dealer in Rug Patterns. 225-f

BRITISH AMERICAN BUSINESS COLLEGE

TORONTO, CANADA

This is the Leading Commercial College in Canada. Its Location is in the Business and Educational Centre of this Province. The Course of Studies has been specially arranged to give a sound business training. Every Subject in the course is taught by men who make these subjects specialties. Arithmetic, Commercial Law, Book-keeping, Correspondence, Penmanship and Phonography are thoroughly taught. The School will re-open on Monday, September 1st. For Catalogue and other information, address THE SECRETARY, Arcade Buildings, Yonge Street.
225-d

CANADA BUSINESS COLLEGE

HAMILTON, ONT.,

Affords the best facilities for obtaining a complete business education. Has the best staff of experienced and successful teachers. The most magnificent college rooms in the Dominion. Course of instruction improved and practical. Ladies admitted to all departments.

A large 40 page Catalogue, specimens of penmanship and full particulars sent on application to
R. E. GALLAGHER, Principal.
226-c

Mention this paper.

BUSINESS EDUCATION!

HAMILTON COMMERCIAL COLLEGE.

Corner King and James Streets.
(Over Federal Bank.)

THIS INSTITUTION offers special terms and advantages to

YOUNG GENTLEMEN AND LADIES

desiring a thorough, practical Business Education. Its course of instruction embraces all the branches necessary to complete commercial training, and is second to none. Its teachers are well qualified for their work, and the number of pupils is limited to what can be properly attended to. Everything connected with the school is the newest and best. No old system has any place in its curriculum.

The location of the College is in the best spot in the city of Hamilton, overlooking the Gore Park. The rooms are large, airy and newly furnished throughout. It will pay to call before applying elsewhere.

Send for circular.

M. L. RATTRAY,
PRINCIPAL.

223-f

Please Mention this Paper.

WESLEYAN LADIES' COLLEGE

HAMILTON, CANADA.

The oldest and the largest Ladies' College in the Dominion. Has over 180 graduates. Faculty, 5 gentlemen and 12 ladies. The building cost \$110,000, and has over 150 rooms. Music and Art specialties. Pupils admitted at any time. Address the Principal,
MENTION THIS PAPER. A. BURNS, D.D., LL.D.
226-c

ONTARIO LADIES' COLLEGE

Whitby, Ont.,

Affords an advanced collegiate course with the privilege of taking professional or University examinations; a full conservatory course in instrumental and vocal music under the direction of Mr. Edward Fisher, of Toronto; a fine arts course by two specialists from the Ontario Society of Artists; judicious training in home and social life by the lady principal, Miss Adams. Buildings and grounds unrivalled in the Dominion for elegance and completeness.

For calendar apply to
225-f Rev. J. J. Haro, M.A., Principal.

Ontario Business College

BELLEVILLE, ONT.

Students in attendance from all parts of the continent and the West Indies. Course most thorough. Fees as low as in other first-class colleges.

Board only \$2.75 a Week.

Entrance at any time.

For circulars, &c., address

ROBINSON & JOHNSON,

225-c

Belle-ville, Ont.

STOCK NOTES.

(Continued from page 376.)

The New York Tribune says: A so-called breeder—but really a speculator—of Clydesdale horses was lately arrested in Chicago for bringing from Scotland and selling at high prices a lot of inferior horses, and forging Clydesdale pedigrees for them. There is rottenness also in the pedigree Jersey business. When there is "fat" in any business open to swindling then look out for the vultures.

The Texas Live Stock Journal, in speaking of the heavy losses amongst blooded cattle in the process of acclimation on the Texan plains, and of the Texas cows for the dairy, has come to the conclusion that dairy herds can be best built up by systematic improvement of the native cattle. The Texas cow is in bad repute, and she is probably the scrubbiest looking animal that can be seen anywhere. The prevailing practice of permitting the calf to run with the dam has injured her dairy reputation, but it has been observed that with an advanced system of management she is extremely susceptible of improvement. Such will also be the case with our Canadian cows.

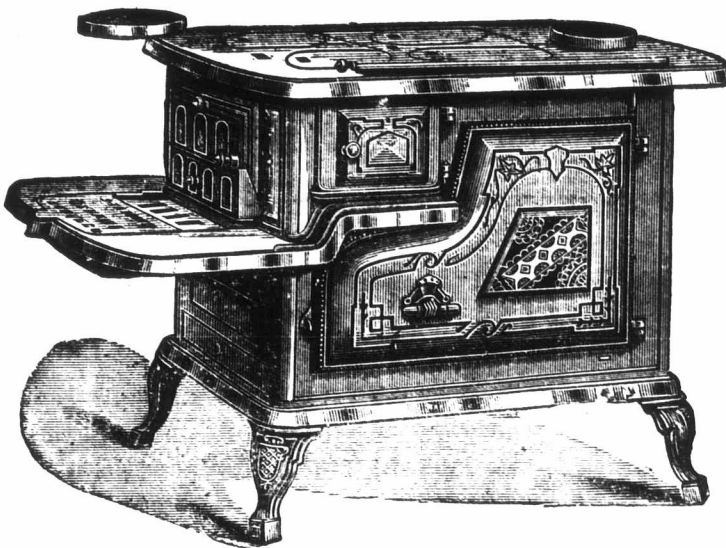
THE FAMILY HORSE.—Attention should always be given the colt, while breaking it, that its disposition may not be injured. A horse may be balky, lazy, fast, or full of spirits, but such obstacles are insignificant, compared with viciousness. A horse that cannot safely be used by any member of the family should not be tolerated on a farm, as his usefulness will be restricted. Yet, many such faults as biting, kicking, and stubbornness, are the fruits of improper training and neglect in the early days of the animal. A vicious horse is also of less value when offered for sale, as his faults cannot be hidden.

MUTTON AND WOOL.—We attach too much importance to wool, not that wool is unprofitable, but because the production of mutton is made a secondary matter. It cannot be denied that in some locations it is easier to raise sheep for wool rather than mutton, owing to the facilities with which it can be transported to market, not being perishable. But it is doubtful if wool is more profitable than mutton in those sections of the country that are but a few days travel by rail to market. To raise sheep that weigh about seventy-five pounds, is not profitable, unless early lambs are secured. How easily a flock of sheep may be made to pay a profit may be illustrated by stating that among the Oxford Downs, are found individual rams that weigh 250 pounds at one year old. While such weight is, of course, exceptional, yet it indicates the great size of a pure breed as compared with the best members of a common flock. Not only the Oxfords, but the Shropshires, Cotswolds, Lincoln, Hampshires, and Leicesters, all attain heavy weights, and greatly improve a common flock in weight and quality of flesh. The clip of wool is also heavier, and as a single male will improve all the sheep of a whole neighborhood, there is no reason why mutton should not be more profitable than wool.—[Farm and Garden.

FAY CURRANT HEAD CRAPES

BEST STOCK IN THE WORLD
SMALL FRUITS AND TREES, LOW TO DEALERS AND PLANTERS, EVERYTHING FIRST-CLASS. FREE CATALOGUES. GEO. S. JOSSELYN, FREDDONIA, N. Y.

"The Standard"---"Champion."



The Cook Stoves for the Farmer.
LARGEST OVEN FOR THE MONEY IN THE MARKET.
All perfect cooks on a moderate consumption of fuel.

"THE ARGAND"

A coal-heating Stove, never excelled for freedom from gas and economy in heating.
ASK FOR THESE STOVES.
If you don't find them with dealers write to us.

THE OSHAWA STOVE CO.
OSHAWA, ONT.

Holders of Highest Awards for Stoves for Ontario and Quebec.

226-ex

"THE GOLDEN BELT"

ALONG THE KANSAS LANDS STOCK RAISING KANSAS DIVISION U. P. R'WAY. WOOL GROWING

Buffalo Grass Pasture Summer and Winter. Unsurpassed for Climate, Grasses, Water.

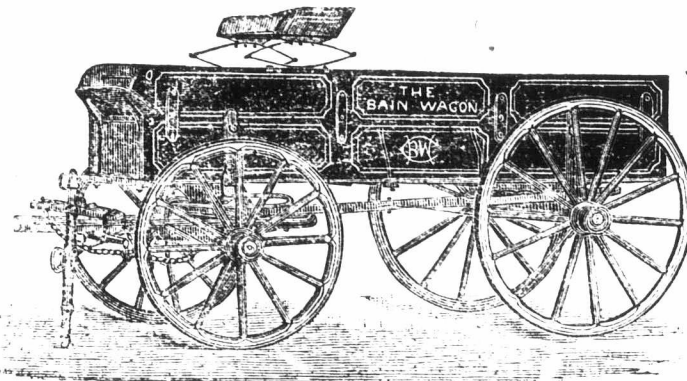
CORN and WHEAT FRUIT

200,000,000 Bus. Corn. 80,000,000 Wheat. The best in the Eastern Market.

Pamphlets and Maps free. **B. McALLASTER**, Land Commis'r, Kansas City, Mo.

226-c

THE BAIN WAGON



IS THE FARMER'S FAVORITE.

Because it is the lightest running wagon made.
Because it is made in the most careful manner, from the best selected seasoned timber.
Because no inferior iron is used, and special attention is paid in ironing it off.
Because the wheels before the tire is put on are thoroughly saturated in boiling linseed oil, which is a sure preventive of loose tires.
Because the patent arms made from our own patterns are superior to those made by other makers.
Because all material used in painting it is of the finest quality, which gives it a superior finish.
Because every wagon is inspected in all its parts by one of the members of the company before being sent out.
Because it is just as represented every time.
Because "the Bain Wagon" is warranted to be well made and of good material, and any breakage occurring with fair usage within one year, by reason of defective material or workmanship, will be made good by any of their agents, upon the purchaser producing the broken or defective parts as evidence.

Agents wanted for every county. Send for descriptive circular and prices to the
BAIN WAGON COMPANY, WOODSTOCK, ONT.
N. B.—We make a specialty in spring wagons. Prices given on application.

226-f

SMALL FRUITS

Cornelia, Daniel Boone, Prince of Ferries
Atlantic, Connecticut Queen, James Vick and other,
new and old Strawberries.
Marlboro, Beebe's, Golden Prolific, Souhegan,
Tyler, Hopkins, Shaffers, Hansell and other leading
Raspberries.
Early Cluster Blackberry,
Fay's Prolific Currant,
Gooseberries, Grapes, and other Small Fruits.
FIRST-CLASS PLANTS. LOW PRICES
Send for full Price List, free to all.

W. W. HILBORN & CO.,
225-tf
ARKONA, ONT., CANADA.

DEREDICK'S HAY PRESSES.



Manufacture at 90 Colborne Street, Montreal, P. Q.
Address for circular P. K. DEDERICK & CO., Albany, N. Y.

SWISS SOAP!

Guaranteed Best in the World!
Ask Your Grocer For It!
Manufactured only by the
HURON SOAP COMPANY, Goderich, Ont.
220-y

NIAGARA GRAPE VINES No restrictions
as to planting.
First class two year vines \$2.00 each.
Grape vines of all the leading kinds at bottom prices.
Small Fruit plants, old tried kinds and latest novelties.
Russian Mulberry very cheap. Send a list of your wants
for quotations, and a free price list. E. D. SMITH
Winona, Ont. 226-tf

BUY ONLY THE DOHERTY ORGAN



CHAMPION STUMP AND STONE EXTRACTOR.

Warranted to do more work
with the same labor than any
other. For circular, price,
etc., send to inventor and
manufacturer

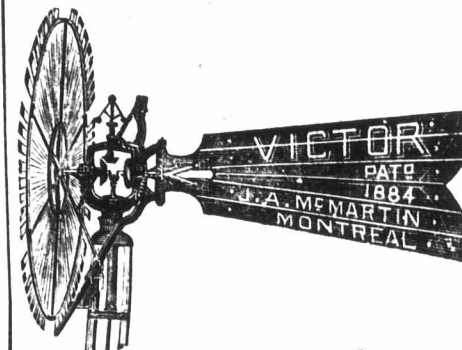
S. S. KIMBALL,
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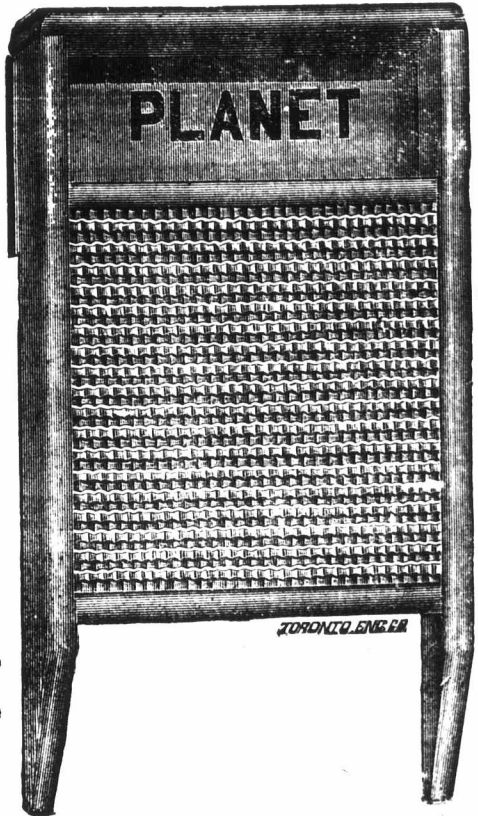


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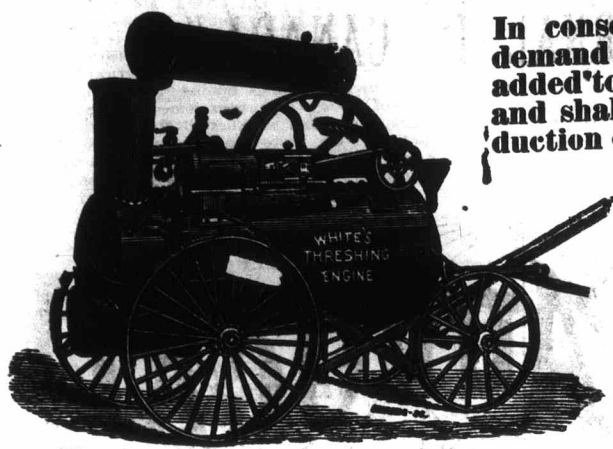
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217-41



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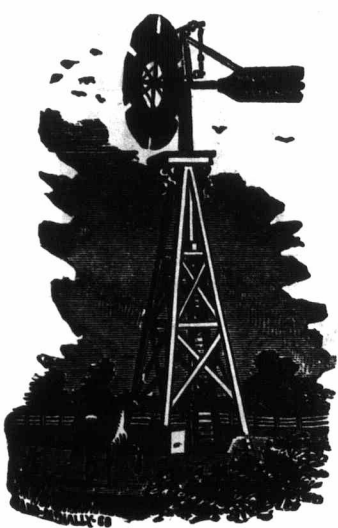
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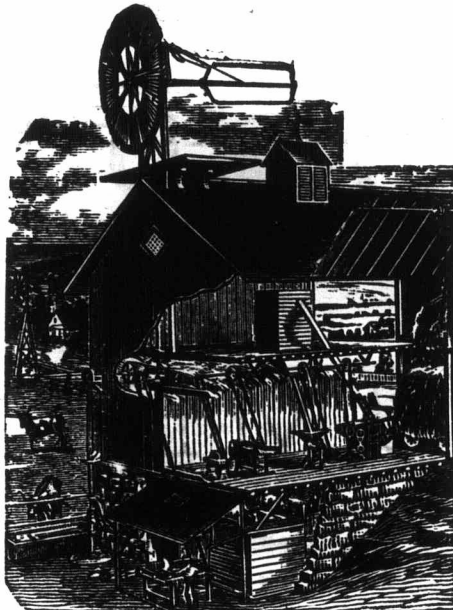
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220-tf

Yours truly, EDWIN KEELER, Maitland P. O.

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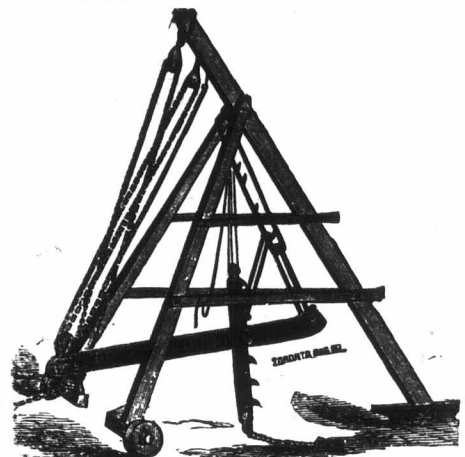
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Mr. Johnson's hint that creameries even were using the adulteration roused those interested to the defensive. Mr. Seymour, of New York, claimed that not the making of artificial butter was a fraud, but the selling of oleomargarine for butter, and that it was thereby robbing those who make genuine butter, and ended his remarks by claiming that there was sadly needed a general and comprehensive law against all adulteration of food.

Col. Colman said that he met one of the owners of one of the great factories, and that he told him that he manufactured the oil in large quantities, which he sold for the purpose of making butterine, and that one would be astonished to learn how largely even creameries were making use of the oily fluid.

The Secretary asked Col. Colman to substantiate his charge about creameries using the foreign substance in the making of butter. Colman replied that he gave only the manufacturer's word, and made no specific charge against any creamery in the country.

Mr. Frazier stated that he had means of knowing all the creameries that use oleomargarine, and that the general accusation was not borne out in fact.

Dr. Strait, of Warren County, O., said that the proper way to defend the interests of the dairymen was to know who were committing fraud.

One of the principal addresses of the occasion was by Prof. L. B. Arnold, on "Cheese and Cheese-Making."

He said that nearly all the cheese in this country is made in factories. Cheese is a luxury and not a necessity, and is not the most important product of the dairy. If cheese were made perfectly, one pound of it would contain as much nutriment as two pounds of meat. But cheese is not usually made as it should be, and contains only about fifty per cent. of the possible nutritive matter. "You may wonder what the matter is," said the speaker. "Simply, we don't know how to make cheese. The cheese-maker doesn't know why he must use rennet. He only knows he must use it. Rennet makes the cheese. The process of cheese-making is a process of digestion. When you have made a curd with rennet, that curd is insoluble in water, and unless it undergoes some further change it is indigestible. That further change is what we want. We want the action of the rennet to partially digest the cheese. One fault of the cheese of commerce is that it goes on the market before it is fit for food. If we remove the phosphates from the milk we get a curd which is insoluble. The milk is treated with acid which decomposes the phosphates, which disappear in the whey. The cheese thus treated requires a large amount of curing. In its early stages it is not fit for food. Cheese is affected by the complex character of milk."

It has been shown that a pail of milk standing for ten minutes in a strong-smelling stable or where any other offensive odor can reach it will receive a taint which never will leave it.

We are more than satisfied with our paper, we are highly pleased with it.
St. Helens, Ont. J. W. F.

Poultry.

How to Manage Incubators.

BY H. S. WALDO.

The hatching season will soon be here again, and it may now be well to consider the best means for attending to this, the most important work of the poultry yard.

Much has been said in regard to the advantage of hatching chicks artificially, and incubators are, without doubt, a great help when properly managed. I find the principal reason that farmers object to using incubators is that they do not want to be bothered with the artificial rearing of the chicks when hatched, and with farmers that have not over one hundred and fifty or two hundred chicks to raise, the artificial rearing of them would cause more trouble and expense than would justify them in undertaking it. My case was not an exception to the rule, but after experimenting some with my incubator I overcame the trouble by managing it in the following way: I set all the hens I could in the natural way, and then "set" my incubator going, and of course the eggs all hatched at the same time. I then placed the hens in large coops, all of which had tight board bottoms, and divided the chicks between them. In this way, some of the large motherly hens would take care of thirty or forty chicks. To be sure the hen cannot give so many chicks as good protection and care as she could a smaller number, and may not raise as large a percentage of them, but if she has a good large coop, with a tight board bottom, enabling the coop to be easily moved to a fresh spot each day, she will, with proper attention and food, raise nearly all of them. If this plan is adopted, the incubator will prove itself a valuable adjunct to the poultry yard, for the hens can, with its help, raise two or three dozen chicks, when formerly they only raised their own batch of perhaps ten or twelve chicks. To be sure, when one engages in the business extensively and raises early chicks for market on a large scale, it might be justifiable to build a large glass house and give careful attention to the rearing of chicks by hand, for when they are large enough to fry, they will, if early in the season, bring exorbitant prices in some of the large cities, bringing as high as fifteen dollars per dozen.

Eggs in Winter.

BY H. S. WALDO.

In order to obtain a good supply of eggs in winter, the poultry-yard must be filled principally with early-hatched pullets. In former times it was almost impossible to obtain broods hatched as early as was desired, as there were so few hens that wanted to set early enough; but now nothing is easier, for we have incubators that can be set at any time of the year.

Old hens have their moulting season during the months of November and December, and winter generally comes before they have fully recovered from the effect of their moult, and as a consequence they lay but very few eggs during the winter months, while pullets if hatched early enough, will commence to lay as soon as October, and if properly housed and fed will continue to lay throughout

the winter. The feeding and housing has a great deal to do with the supply of eggs. The house does not need to be heated artificially, but can be made out of common boards and lined with tarred paper with plenty of glass in the south side. In this they will keep comfortable and return a good supply of eggs if the other part of the work, that of feeding, is properly attended to. Variety and plenty of food are absolutely necessary. Feed regularly, and no more than the hens will eat without wasting. Corn-meal, bran, middlings or something of that sort, mixed and fed warm, is an excellent morning feed. Whole grain of some kind is best to fill their crops with at night, for they want something that is heating, and does not digest too rapidly to keep them warm through the long cold nights of winter. Any one kind of grain will not satisfy the requirements of the fowls at all times. They need a change, and a liberal supply of different kinds should always be kept on hand and fed in rotation as required. Vegetable food should not be forgotten, and also a good supply of meat once or twice a week is a very important part of their feed. Green food can be supplied in several different ways. Perhaps the easiest and simplest is to store cabbage in the cellar some time during the fall, and when fed in winter it should be tied up by the roots, with the head down and about eight or ten inches from the ground. In this way the fowls will pick at it until nothing but the stump is left, but if thrown upon the ground it will soon become dirty, and the greater part of it will be wasted.

A Turkey Fair.

The thriving town of Smith's Falls rejoices in its Annual Turkey Fair, which has become an institution of the place. On the 11th and 12th of December streams of farmers' equipages, consisting of fine market waggons and buggies, drawn by handsome and well groomed horses, were to be seen hurrying into the town from all directions. The vehicles all contained fine fat turkeys and geese, got up in good style, for inspection and purchase, by representatives of American firms, about thirty-five buyers, agents from Boston, New York and other places. These were soon to the front, and at once showed that they meant business. One feature of the poultry selling is that the

"WOMEN FOLKS" POCKET THE PROCEEDS, and their hearts were soon gladdened and their pockets weighted as a result of the high prices obtained, 15c., 16c., 17c., 18c., and as high as 22c., being freely paid for turkeys, and 8c., 10c., and 12c. for geese. As soon as the buyers purchase, the loads are driven to the different storehouses of the merchants and other places which are at the disposal of the buyers. Here the poultry are weighed and afterwards packed in cases containing from 250 to 300 lbs. each, marked, and taken to the depot for shipment. The wives and daughters soon find their way to the stores, where they are heartily welcomed, and soon huge parcels of dry goods, millinery, groceries, and other things are purchased. The merchants make great displays on the two days of the fair and are amply rewarded by the increased trade done. Many farmers drive long distances to attend this fair, often coming 30 and 40 miles, and in very many cases expend the

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