FARMER'S ADVOCATE

AND HOME MAGAZINE.

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THE FARMER'S ADVOCATE & HOME MAGAZINE

WILLIAM WELD, EDITOR AND PROPRIETOR.

THE LEADING AGRICULTURAL JOURNAL PUBLISHED IN THE DOMINION.

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

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Our Monthly Prize Essays.

CONDITIONS OF COMPETITION.

1.—No award will be made unless one essay at least comes up to the standard for publication.

2.—It is not necessary for essayists to agree with our policy, so long as they give sound reasons for differing from us.

3.—The essays will be judged by the ideas, arguments, conciseness and conformity with the subject, and not by the grammar, punctuation or spelling, our object being to encourage farmers who have enjoyed few educational advantages.

4.—Should one or more essays, in addition to the one receiving the first prize, present a different view of the question, a second prize will be awarded, the sum being decided by ourselves in each case, and the essay will appear in the same or in a succeeding issue.

Our prize of $5.00, given for the best original essay on the following subject: *Can Mixed Farming be so Changed that more than the Ordinary Amount of Work may be Profitably Done during the Winter Months?* has been awarded to James Shannon, Wolverton, Ont. The essay appears in this issue.

A prize of $5.00 will be given for the best original essay on the following subject: *Is Our Future Husbandry to be Special or Mixed?* Essays to be handed in not later than Dec. 15 h.

A prize of $5.00 will be given for the best original essay on *Personal Observations on the Effects of the Removal of Our Forests.* Essays to be handed in not later than Jan. 15.

Notice.

All letters respecting the business of the ADVOCATE should be addressed "FARMER'S ADVOCATE," and not to any private person. If intended for W. Weld personally, write the word "personal" or "private" above the address.

Editorial.

On the Wing.

A RETROSPECTIVE VIEW.

At the close of each year it is proper for everybody to take a retrospective view of the past, to consider what changes have taken place. The past year has been one of very great importance. In this part of the Dominion it has been one of the most bountiful and luxuriant seasons we have experienced; the cereal crop has been good and secured in good order; the pastures were never more luxuriant than they have been this fall, elevating the spirits of all engaged in the dairy business; the fruit and root crops have been abundant; our farm stock has increased and thriven as well as any one could desire. If peace, plenty and prosperity are the sources from which happiness is derived, it must be with us here in Canada. We doubt if any part of the world can show such progress and thrift, combined with less poverty and disease, as the western part of Ontario.

When crops are bountiful, prices are sure to be lower than in seasons of scarcity. Those who complain should consider that twenty-one years ago cows and beef cattle would not bring as much cash by nearly one-third as they will now realize. Horses command highly remunerative prices; and our dairy and fruit interests were never on a better paying basis. Notwithstanding this there are complaints of scarcity of cash.

All parts of the Dominion may not have been so highly favored this year; some have suffered from fire, some from drouth, while contagious diseases among farm stock have touched some parts of our country; but our Government has promptly acted.

The gigantic undertaking of connecting our Provinces together, and affording a shorter route for the commerce of the world through our Dominion, has been accomplished. The grand idea of holding a Colonial Exhibition in England has this year been successfully carried out, and great commercial facilities may be anticipated. Our Government has decided this year to establish experiment stations in different parts of the Dominion. This will eventually cause a considerable additional expenditure of public funds, and the greatest care must be exercised to have them judiciously expended.

A few have questioned our criticisms in regard to the mismanagement of the Model or Experimental Farm at Guelph, but duty to our farmers demanded the truth should be proclaimed. Had our suggestions been regarded, the Model Farm would be more popular than it now is, and better results shown.

One of our great educators of the past, the Provincial Exhibition, is fast falling into oblivion; other interests have superseded the interests of the farmers to an injurious extent, and it will now be difficult to restore its lost popularity. This is much to be regretted. There have for years been numerous complaints of injustice; advice and remonstrance from experienced men have been too little regarded. The Provincial Board have been too intimately connected with the Shorthorn Herd Book, and the farmers have paid large sums of money into their hands for the registration of thousands of cattle, which they now regret.

Probably one of our greatest achievements has been in checking the introduction and spread of contagious diseases. We personally inspected the localities where Anthrax was sweeping away our stock, and visited the first cases of Foot and Mouth Disease, Hog Cholera and Tuberculosis. Personal investigation of our quarantines was made, and the attention of the authorities called to their inefficiency. Information on these points was published in the ADVOCATE from time to time when deemed proper. For doing this our veracity was questioned by some in the public press, but fearing injury to our live stock trade, we declined to reply; subsequent events, however, proved the correctness of our reports. We also by letters and telegrams, at our own expense, furnished information about these diseases, etc. In each case the Dominion Government promptly responded by immediately sending veterinary surgeons to investigate, and by giving them full power to act. The freedom of our country from stock diseases is to be attributed to these prompt steps.

Mr. Farrington, one of the chief founders of the Dairymen's Association, said twelve years ago that no better matter regarding the dairy interest appeared in any paper than in the FARMER'S ADVOCATE.

It is a pleasure for us to look back over the twenty-one years that have passed since the publication of the ADVOCATE was commenced. In that short time, in this locality, it appears that all of the once common ox-teams have given place to horses; the scythe and the grain cradle to the mower and the harvester; the uncertain home-made cheese has given place to the factory product; reliable grafted fruits have supplanted the natural and doubtful varieties; improved farm stock of all kinds has been more extensively disseminated throughout the country than ever before; great advantages have been secured by our

farmers through the introduction and cheap distribution of the best cereals, roots, fruits, grasses, vegetables, trees, etc.

The first and best information in regard to these subjects has been given through the columns of this journal. The health, economy, comforts and pleasures of the home have been closely attended to; many will admit that there is not a better educator in Canada for the farmer and his family than the ADVOCATE, which has always been true to its name and its cause, having higher aims than sectional or party ties. Your interests have been duly guarded by our endeavors to prevent frauds and expose deceitful and injurious practices wherever they exist.

The FARMER'S ADVOCATE has always been conducted in the interest of Canadian farmers. Our artist who sketches live stock we specially instructed. Preference has always been given to Canadian talent, and unbiassed writers have been its contributors. It has withstood the competition of imitators and the onslaughts of various forms of organized opposition. It has not allied itself with any organization. It has not existed by means of taxation, but by voluntary subscriptions from the best farmers in each Province of this Dominion.

Now, having the largest list of subscribers of any agricultural publication in Canada, composed of the best farmers in all parts of this Dominion, belonging to both political parties, to every religious sect, and to all honorable organizations, we ask every one having the true interest of the farmer and happiness of his home at heart, to use his or her influence to extend the usefulness of the ADVOCATE by every legitimate and honorable means.

The Colonial Exhibition

Has now closed. Many Canadian exhibitors have already been well repaid for their pains Mr. Mason sold one of his pianos to go to Windsor Castle; Mr. Massie sold one of his harvesters to Lord Lansdowne; the Harris Manufacturing Co., John Elliott & Son, J. O. Wisner, Son & Co., Bell & Co., Cockshutt & Co., Watson & Sons have made good sales of agricultural implements. Bell & Co and Karn & Co. have done a large business in organs; the Ontario Pump Co. have opened a large business for their pumps; and many others have been successful in effecting sales. Many English firms have taken patterns from Canadian implements to manufacture from. A great stimulus has been given for future commerce in all our products, and a large emigration will follow. The establishment of a permanent exhibition and market is in contemplation, and imperial federation is suggested. This, if it can be carried out on an equitable basis, should be highly beneficial to the nation and to the world. The bringing together of the scattered colonies into one central point, as the Colonial Exhibition has done, will no doubt be an important factor in facilitating the great scheme of the imperial federation.

In the dining room in London, on Holborn Street, where the Colonial representatives first dined together, the following was the only motto over the heads of the representatives, Lord Lorne and the Lord Mayor of London: *Domine dirige nos*, "O Lord, direct us," Let us try to apply it.

More Farmers Wanted in Parliament.

The small percentage of farmers in our parliament is a disgrace to any agricultural community. Our agricultural affairs are fast becoming more political, and the demand for honest, intelligent farmers to administer their own affairs is proportionately increasing. Experience must have taught you the folly of hiring professional politicians to do your thinking, especially when you are not organized to look after them. What is wanted is fewer talkers and more thinkers. Select the man of sound principles, whose only pledge is to sustain the right and rebut the wrong. Both Governments are squandering vast sums of money nominally for your benefit, but actually for the purpose of obtaining your vote and influence.

Although it is not in our sphere to chat politics, yet we have always fearlessly and independently discussed agricultural questions, their connection with political issues being a secondary consideration. At times our words have fallen hard on both parties, not for the purpose of swaying your political opinions, but for your good as farmers and as men. Our severest attacks must always be against the parties in power, and it is unfair for you to call upon us to assail the party who has no power to do wrong. If the party in power fails to administer your affairs justly and honorably, don't infer that the other party will do better. The root of the evil lies in our party system, and nothing short of a revolutionary change can bring about the desired state of affairs.

Agricultural Prophets.

So many storms are brewing now-a-days, not alone in the meteorological, but also in the industrial world, that the mere weather prophet now fails to command that degree of attention which used to be his reward.

There has never been a greater demand for prophets in the industrial world for the genius of man has not yet succeeded in inventing a true industrial barometer, and the want is specially felt in our agricultural sphere. The boom is not without its source, and it sweeps along with such force that the unprepared are unable to withstand its fury, the result being an alarming destruction of life and property. It is said that the farmer is hard to move. This is a wise provision of Providence under the existing condition of affairs, where the motion is not in the right direction.

The effect of every agricultural movement is of great concern to our farmers, modifying their happiness and prosperity. How many of our agricultural authorities in this fast age stop to discuss the causes or the effects of upstart schemes set in motion nominally for the benefit of agriculture? Almost none! Hence the demand for agricultural prophets. The true agricultural prophet is not a mere guesser; he can foresee the effect from the cause. The utility of such a man is incalculable, there being a strong tendency to motion from selfish motives, a dangerous crowd following the leaders, and the effect must always, sooner or later, end in disaster.

Let us enumerate a few instances. One of the most iniquitous was the "baby-beef" boom—high feeding for prizes and awards, the ruination of a few animals being the cheapest method of advertising the rest of the herd. [illegible] system has now fallen by virtue of its own [illegible]ess, and the authorities are now writing rotten[illegible]ercely against it than they formerly far more [illegible]r. We were the first to predict did in its fav[illegible] we were denounced for damthis reaction, an[illegible] interests.

aging our live-stock [illegible]est frauds. Splendid

Then came the milk-[illegible] for the purpose of cows were stuffed to death [illegible]ay or two, and producing a big yield for a [illegible]anipulators creating a big blow. What the [illegible] really wanted was a big name and a fa[illegible]cy price for their stock. We instantly demanded the cost of production, the yield per season, the quality of the milk, etc., but we were ruining our dairying interests again, of course. What have been the results? Cows are now being tested on principles approximating those we enunciated. When this boom reached the height of its glory, a proposition was made to lobby our Government to exterminate all stock that had no pedigrees or big "records." What journal exposed the rascally designs of these manipulators? Who now hears a whisper about this fraudulent scheme? Under the necessity of saying something when they speak, so-called authorities have told you to breed from the best, meaning thereby that an animal to be the best must have a long pedigree. What journal has placed in your hands the facilities by which you can make for yourself practical tests as to the individual merits of the animals composing your herd? Which is the only agricultural journal in Canada that has had sufficient courage to expose the registration frauds?

The ADVOCATE has never shrunk from its duty even when threatened with extinction by the manipulators and their organs. The death of the ADVOCATE would be a bright new era for them, but it still lives, and continues to be the leading agricultural journal in Canada. These are a few of the claims we make for a renewal of your patronage for the coming year.

Our Agricultural Library—Books for our Readers.

We have recently received a large number of letters from our readers asking our advice as to best books on different agricultural subjects. We have delayed our answers pending the revision of the list of agricultural works which we keep in stock for the accommodation of our subscribers.

We are pleased to see the increasing thirst for agricultural knowledge, and we have done all we can to make the best possible selection. The list will be revised from time to time as circumstances require, and meanwhile will be small, but the choicest authors have been selected. We regret to see so great a dearth of Canadian talent amongst agricultural writers; foreign works in some branches are not so suitable to the practical wants of our farmers as we would desire, but we perform our duty when we make what we consider to be the best selections, and dispose of them to our readers at the very lowest figures, either for cash or as premiums.

The names of the books and of the authors, with prices attached, will be found in our advertising columns.

Bound Volumes.

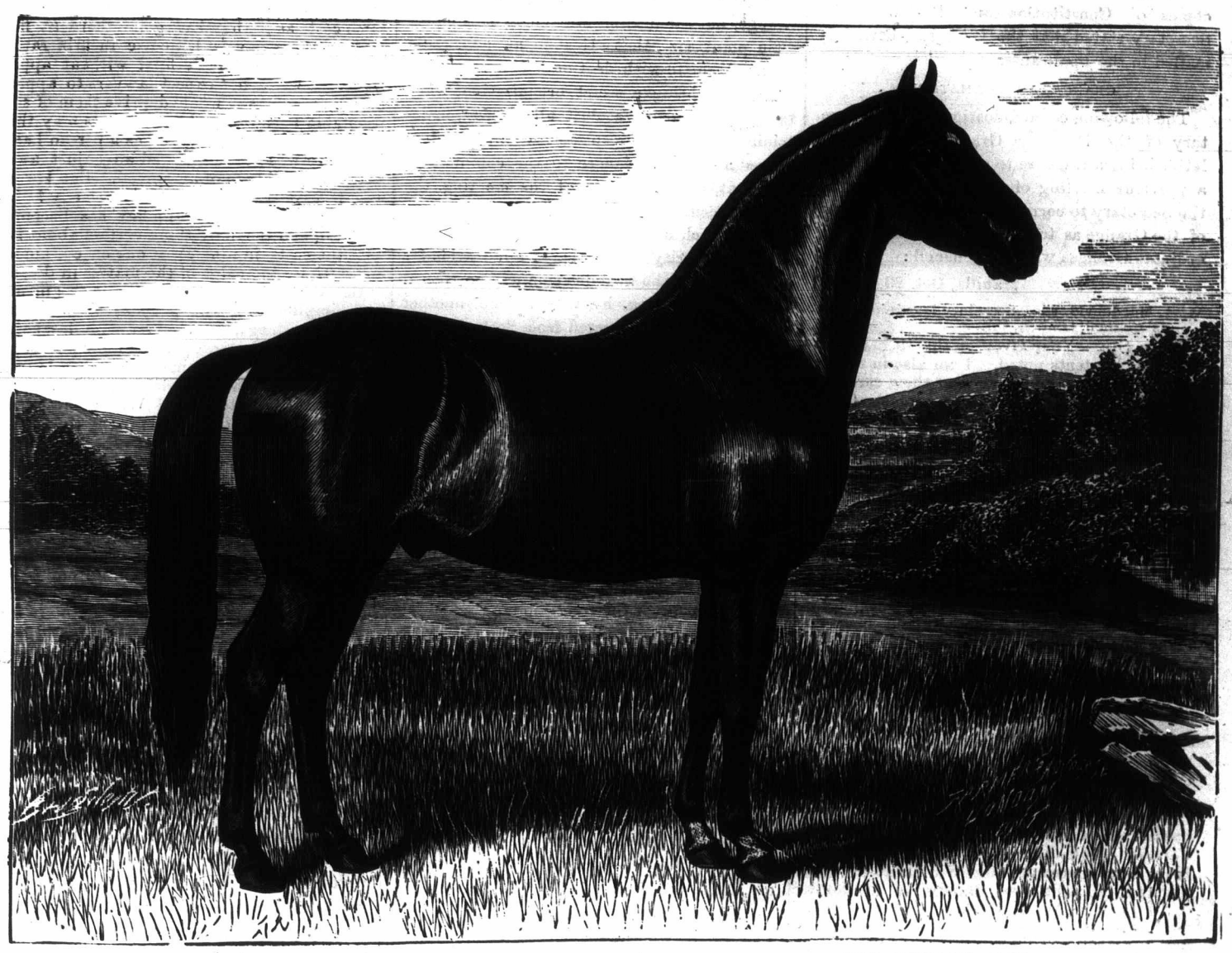
Bound volumes of the FARMER'S ADVOCATE for 1886 are now for sale. You cannot make a friend a more valuable present for the same amount of money. Every farmer should have it for reference. Price, $1.60. Address this office.

Coach and Army Horses.

In our last issue we published an article from Col. Ravenhill describing the stamp of horses required for the British army, and gave illustrations of specimen horses purchased in London for this purpose. As this trade is likely to develop, we shall encourage it all we can, and present the necessary details to our readers from time to time.

In the breeding of these classes of horses many animals will be produced which will excel on the turf, and consequently bring much higher prices than those offered by Col. Ravenhill, but whether such speed can be developed or not, the breeding of such horses cannot fail to be profitable. Many useful coach, carriage, general purpose, and road horses will be the result, which will bring higher prices than for army purposes. Very little skill is required in breeding horses for the Imperial army, as the tests are only for soundness and conformation and not for speed. The proper mating of sire and dam having sound constitutions and the requisite size, shape and weight, will invariably produce the desired results. But farmers must abandon the practice of attempting to produce such animals by using draft stallions upon light mares, or light stallions upon heavy mares. A medium course should be adopted both in the selection of the sire and the dam. There are two stamps of stallions which may be advantageously selected, the one with the spirit and action of the Thoroughbred predominating, for use upon our heavier and more sluggish mares, and the other a heavier stamp, muscular, compact and of great endurance, for use upon lighter and more spirited mares. There is still another stamp which combines all these qualities in a remarkable degree.

The accompanying cut gives an illustration of "Lord Sudley," the property of Mr. T. D. Hodgens, of Elmwood Stock Farm, who is also Mayor of the city of London. Mr. Hodgens' farm was described in our May issue, 1884, in connection with his celebrated road and carriage horse "Albion." The farm is situated in London township, 2½ miles from the city limits.



"LORD SUDLEY," THE PROPERTY OF T. D. HODGENS, ELMWOOD FARM, LONDON, ONT.

Since this time Mr. Hodgens has greatly enlarged his sphere of usefulness as an importer and breeder. For the past ten years he has made a specialty of breeding trotters from the best strains of blood, namely, Hambletonian, American State, Royal George, and pacing crosses, of which he now has over 50 head, most of which are for sale. He made a large importation last summer, and has recently imported seven coach and Cleveland stallions.

"Lord Sudley" was bred by the late Lord Sudley, Todington Park, Exeter, England. This magnificent stallion was sired by Lord Sudley's coach horse, Young Dexter. His dam was Lord Sudley's carriage mare, by Wild Tommy. He is registered in vol. 2 of the English Coach and Hackney Stud Book.

"Lord Sudley" is a beautiful bay with black points, excepting a little white on the coronets of the front feet. He has an intelligent head, a good length of neck gracefully set on his sloping shoulders; has a good length of body with ribs well rounded, giving a smooth appearance, which is so much admired in carriage and saddle horses; his legs are extra clean and cordy, indicating fine quality throughout; his feet are sound and faultless; his style and action are superb, and his motion is rapid and graceful for a horse of his size. He stands 16 hands 2 inches high, and weighs about 1,400 lbs. According to the mare used, he is suited for producing coach, general purpose or army horses. He was exhibited at the Western Fair last fall, and took the first prize amongst a large number of competitors in his class.

In our next issue we will give an illustration of another stallion suitable for the purposes indicated.

As there are few absolutely sound horses, so there are a great number practically sound—that is, free from diseases or defects which are likely, within a limited time and under reasonable usage, to incapacitate an animal from satisfactorily performing a fair amount of labor. It requires considerable judgment, based upon extended practice, to know where practical soundness begins and ends, and upon this point it is not unusual to find wide divergences of opinion even among experienced men. All horses, to be useful to their owners, should be practically sound at the time of purchase.—Reynolds on Draft Horses.

Farmers' Clubs.

Dominion Farmers' Council.

[This Council meets on the third Saturday of every month at 2 o'clock p. m. All communications should be addressed to the Secretary, W. A. Macdonald, London, Ont. The Council has now on hand pamphlets containing its Constitution and By-laws, with an account of its origin, also pamphlets containing a form of Constitution and By-laws suitable for Farmers Clubs, which will, on application to the Secretary, be distributed *free* to all parties having in contemplation the organization of clubs.]

The regular monthly meeting of this Council was held on the 20th ult., President Leitch in the chair.

Several communications were read asking for copies of Constitution and By-laws. The Secretary stated that the same had been duly mailed to the applicants.

GRANGE AMALGAMATION.

The following communication from the Secretary of the Dominion Grange was read, the letter being a response to a resolution passed at a previous meeting of the Council, directing the Secretary to correspond with the Secretary of the Grange as to the amalgamation of subordinate Granges with the Council:

Manilla, Oct. 23, 1886.

W. A. Macdonald, Esq., Secretary Dominion Farmers' Council, London, Ont.:

DEAR SIR,—Your favor of the 19th inst. to hand and contents noted. I am also in receipt of your By-laws, and have read them carefully over. In regard to amalgamation of the Council and subordinate Granges, there appears to be an obstacle in the way, as you are aware that there is a certain amount of secret work in the constitution of the Grange to prevent imposition upon its members from designing persons outside of the Order. This would necessitate your members becoming members of the Grange at the same time. But I see no reason why there should not be the greatest harmony existing between the two societies, as their aims and objects run concurrently, working for the farmers' social, intellectual, and financial advancement. Yours very truly,

HY. GLENDINNING.

The following communications were also read:

Sombra, Ont., Nov. 15, 1886.

Secretary of the Dominion Farmers' Council:

SIR,—We hereby beg leave to inform you that Selman Grange, No. 899, has passed a resolution subscribing to the objects of the Dominion Farmers' Council, and that we co-operate therewith under the name of Selman Farmers' Club, and have appointed Wm. S. Howell as Corresponding Secretary for that purpose. FRANCIS BROWN, W. Master.
W. T. HENRY, Asst.-Sec'y.

Sombra, Ont., Nov. 15, 1886.

Secretary of the Dominion Farmers' Council

SIR,—We hereby beg leave to inform you that the Co-operative Branch of Selman Grange has passed a resolution to co-operate with the Dominion Farmers' Council, and subscribe to the objects thereof, and have appointed W. S. Howell Corresponding Secretary for that purpose. A. A. MEYERS, Chairman.
W. T. HENRY, Sec'y.

Sombra, Ont., Nov. 15, 1886.

Secretary of Dominion Farmers' Council:

SIR,—Selman Grange, No. 899, has passed a resolution subscribing to the objects of the Council and co-operation therewith, and has organized a series of special meetings to be held on the Monday evening after each full moon, and has invited other farmers and patrons to meet with and co-operate with them. The first meeting for organization was held Oct. 25; the second to-night. The discussion to-night is on "The Orchard."

A. A. MEYERS, J. P., Chairman, does not trim his trees, and they bear equally as well as those trimmed.

P. D. SHEENAN trims at any season, but keeps the land well cultivated and manured, and has a thrifty orchard. Farmers pick apples too late generally, which makes too many culls, as they get ripe, fall off and bruise, or are blown off by the wind.

P. N. HENRY would plant in the fall, and put a piece of board under each tree to make the roots spread; would not have any one trim in the spring; would cut out the flat-headed borer with jack-knife; manures in spring with straw as mulch, which prevents the tree blooming too early, so escapes frost.

H. WINTER manures his whole land in the orchard in the fall with rotted manure, well spread over the sward, as advised in the ADVOCATE some years ago. He trims a young orchard in July and early winter with jack-knife; would not have farmers sell their ashes.

W. S. HOWELL,
Cor. Sec'y Selman Farmers' Club.

The above communications created a lively and lengthy discussion. The spirit of the Council was that of good feeling towards the Grange, but the meeting was unanimous on the main point, viz., that a Grange, as such, could not amalgamate with the Council on account of the former being a secret organization, while the latter protested against all secrecy, maintaining that secret organizations had too often proved a source of danger to the community, and that, in the opinion of the meeting, the Council could protect its interests without resort to such a weapon. There having been some irregularity in the form of application for amalgamation, the final decision was postponed until next meeting, by which time another communication is expected from Sec'y Howell.

The following motion was moved by Frank Shore and seconded by Jas. K. Little: "That each amalgamated club be privileged to elect one delegate at any time, either general or for any specified purpose, who shall be entitled to attend any meeting or meetings of the Council, and vote thereat, and enjoy all the other privileges conferred upon the members of the Council, and that no fee be charged for such privileges, such delegate, before sitting or voting in the Council, to be introduced by presentation of a copy of the resolution by which he was appointed, duly attested by the signatures of the President and the Secretary of the club." Carried.

MUNICIPAL LITIGATION.

HENRY ANDERSON, Vice-President of the Council, read the following paper on the above subject:

The Township of Westminster has suffered severely by vexatious law suits and exorbitant law costs. I shall be well pleased if I can make any suggestions that may tend to lessen the legal robbery to which so many corporations have been subject.

It has become a common saying that a jury is sure to give a verdict against a corporation, right or wrong. The question then arises, Would justice be better administered without juries? I say no, decidedly. Juries are our best safeguards against official tyranny, and in suits between individuals they generally decide justly; but the original idea in the jury system was to give every one the right to be tried by his peers.

The radical defect of the present system is that corporations are not tried by their peers. Corporations and individuals are not in any sense peers; there is no equality between them, and when a suit is brought against a corporation, the jury is composed of individuals whose sympathies and prejudices are sure to be in favor of the individual as against the corporate body, and an impartial trial is impossible. I would not accuse juries of doing wrong intentionally, but the merits of even the clearest case, after it has gone through the process of mystification employed by the counsel at the bar, is generally so inextricably mixed and confused in the minds of the jurymen that they cannot be sure which is the right, and so let their sympathy dictate the verdict.

The only remedy for this state of things is that all claims against corporations should be finally settled by arbitration; then both parties have a chance of being fairly and equally represented by persons chosen by themselves as being specially qualified to decide the matter in dispute.

The Municipal Act provides elaborate and expensive machinery for conducting arbitrations, and if the award finally settled the case, all would be well, but unfortunately the Act also provides that all awards so made shall be subject to the jurisdiction of the High Court of Justice, so that after you have gone to the trouble and expense of holding an arbitration and getting an award, the case may not be finally settled; for if either party is dissatisfied, and is willing to risk the cost, the case can be brought into court, where corporations are sure to meet the same disadvantages and incur the same costs as if they had gone there at first. In fact, there is very little use in arbitrations until awards are made final without appeal. Of course we cannot expect lawyers to approve of this course, as it would deprive them of some profitable business, and some others may think it a hardship if in certain cases a person had to submit to what he considered an unjust award without the chance of an appeal. But I would ask, Is a court of law a certain remedy? The glorious uncertainty of the law has become a proverb, and the only thing certain about it is that the costs, in nine cases out of ten, amount to ten times the value of the matter in dispute.

But can we expect to get the laws amended and simplified for the purpose of preventing lawsuits, as long as we send so many lawyers to parliament? Indeed, the multiplicity of changes and so-called amendments made in the law by the Ontario Legislature, especially the changes in the Ditches and Watercourses Act, would seem to be framed expressly to promote litigation or to prevent drainage. I know by experience that it has affected both these results in our Township.

It would no doubt have a good effect if all Farmers' Councils or Clubs in the country would pay more attention to the laws affecting their own interests, and, by consultation and discussion, arrive at some definite conclusions concerning the measures required for their benefit. So long as farmers remain mere blind adherents to one party or the other, and think more of men than measures, they can scarcely expect others to take much trouble to think for them.

The paper created a lively discussion amongst the practical farmers present, especially the last paragraph. Numerous cases were cited in which individuals, on the most trivial provocations, succeeded in obtaining damages from municipal corporations. The sentiments expressed by Mr. Anderson were heartily concurred in. It was regarded as a crying shame that lawyers should be permitted to represent rural constituencies, while farmers would be held out to ridicule if they proposed to stand nomination for city constituencies. It was thought that farmers were perfectly capable of representing their own interests in Parliament, but the desired change could not be brought about without increased organization and education.

TESTS OF DAIRY COWS.

A committee was appointed to report upon the scheme proposed by the Council to establish a register for dairy stock, based upon individual merit. The committee will report at the next meeting of the Council.

In choosing a programme for next meeting, the Secretary was directed to write to Mr. J. B. Freeman, M. P. P., asking him to prepare a paper on "Renting Farms on Shares." At the annual meeting of the Council, to be held on the third Saturday in January, a public meeting will be advertised, when the subject of

"The Advantages of Farmers' Clubs" will be discussed, leading members of the Council and others taking part in the discussion.

The Council adjourned until the third Saturday in December (18th inst.)

Farmers' Clubs.

Now that the busy season is over, it is time to look into the future, and lay out your plans for the coming season. The questions should be discussed from every standpoint, and in order to arrive at the safest conclusions, you should discuss the questions with your neighbors. A half a dozen of you might meet regularly at your own homes, and if you have any system in your discussions for the purpose of saving valuable time, call yourselves a farmers' club. A large number of small clubs is preferable to a small number of large ones. In large clubs there are sure to be a few windbags who delight to hear themselves talk, which seriously detracts from the efficiency of the discussions. In small clubs such neighbors can be selected who are bent upon learning something, and the debates are therefore sure to be interesting. Your wives and daughters have also an opportunity of putting in a good word in dairying, poultry-keeping and other useful branches.

Choose the programs in advance of the meetings, so that each member will be prepared with useful and practical information, and if you get stuck in arriving at satisfactory conclusions, write to the editor of your agricultural paper. Don't fail to select interesting and practical subjects for discussion, which will prevent the meetings from getting tame and unattractive. When each member feels that he has a duty to perform, he will do it with greater pleasure than when no work is imposed upon him. Establish communication between yourselves and neighboring clubs, either by letter or delegation. If there is a farmer in the vicinity who is quite an authority on any branch of farming, invite him to be present, or ask him to send in a paper to be read and discussed. Write to your agricultural paper and make your wants and feelings known; if your objects are laudable, which they are sure to be, your editor will sympathize with you, and help you all he can.

Sometimes you can see several years through the mists of the future; you can do so at this moment, so you should discuss plans of organizing the farming community on a large scale. There are lively issues in store for you in the near future, and as you cannot build up a formidable organization all at once, commence now, and let the good work go on slowly but surely.

Get Your Advocates Bound.

If no book-binding establishment exists in your vicinity, you may get them done by sending them to Mr. Charles Chapman, of this city, who will bind and return postpaid for 60 cents. It will cost you but four cents per pound to send them per book post. The covers are usually taken off before binding.

"And he gave it for his opinion that whoever would make two ears of corn or two blades of grass to grow upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country, than the whole race of politicians put together."—[Swift.

The Farm.

Permanent Pastures.

Most of our readers will have read with interest the discussion on this important subject which appeared in our October and November issues, Prof. Arnold and Mr. R. J. Graham being the leading participants. The question received an immense impetus at the Farmers' Institutes a year ago from a boom set in motion by the Model Farm. The professor is not in favor of permanently pasturing arable land; he holds that the owner of unarable land, the owner of too much land, and the lazy farmer, are the only parties who should seed down to permanent pasture. Mr. Graham calls the professor a theorist, and gives facts and figures from his own experience to prove that his barley crop left a profit of 6¾ percent on the investment in land at $100 per acre, while his permanent pasture yielded 8⅝ percent profit on land at the same price, although its market price was only half that of his barley land.

Prof. Arnold is a close observer and a distinguished investigator; he comes into frequent contact with all classes of farmers and dairymen, and has visited many a permanent pasture, although he may have no practical experience of his own. His views should therefore have considerable weight. Mr. Graham possesses the faculty of awakening thought and discussion in his business-like manner of presenting his cases. He is evidently a strict business farmer, whose example is worth imitating. If the learned professor came into contact with many such farmers, he would never fail to arrive at sound conclusions.

However, one experiment, no matter how accurately conducted, proves very little, and many loose experiments, such as those made in permanent pastures by ordinary farmers, are just as valueless; and we desire to draw attention to a few points which keep apart the two excellent authorities above quoted. The professor speaks of American conditions, where drouths are very liable to prevail, which are very unfavorable to all pastures, permanent or temporary. We do not suffer in this respect to the same extent. Mr. Graham speaks of his pasture being watered by a living spring, and as the field is on the rear of his farm, it is likely to be well sheltered. His conditions are therefore very favorable, especially if his field is well drained, and he should not infer from his experience that every farmer, or even a majority of farmers, could make the business profitable.

There is much misconception on the question of permanent pastures. The general impression is that, as in Mr. Graham's pasture, a number of varieties of clovers and grasses are necessary for their formation, and he has not informed us how many of these varieties have remained permanent for even the four years of their existence. It requires many years to test a permanent pasture of this kind. If our native grasses eventually crowd the other varieties out of existence, we cannot speak very flatteringly of permanency. A permanent pasture may be composed of only one variety, and if this is native to the soil and climate, we know that it is permanent; foreign varieties must be tested in every locality for a long series of years. We have seen varieties flourish on one side of a hill, and fail on the other side; some must have a drained soil, and some delight in low, sheltered places; some will not stand such close cropping as others. Everyone knows the advantages of a large number of varieties of grasses and clovers; it lengthens the pasturing season, withstands drouths, makes a heavier growth, has a larger feeding range in the soil, etc., but all these advantages are of little avail where only a few varieties can be made permanent.

There are leading American authorities, practical men, who disagree with Prof. Arnold's views. Those who are acquainted with the far-famed blue-grass regions, where there are many old established permanent pastures of this variety, speak very flatteringly of its many qualities, and what is asserted of these regions applies with equal force to many parts of Canada. Mr. Waldo F. Brown, whose honesty or intelligence cannot be questioned, in a letter to the Philadelphia Press, after describing a journey through Ohio and Indiana in the spring after the destructive winter of 1884–5, when all vegetation seemed to be dead, except the blue-grass pastures grazed by contented herds, makes the following allusion to the varieties of blue-grass:

I enumerated the following points in favor of a permanent blue-grass pasture. (1) This grass is adapted to rolling lands, unsuited to the plow, and when once set with it there will be no loss from washing. (2) There is no such thing as a failure of crop with it, as in the dryest season there is always at some part of the year a heavy growth of it, and almost without exception it makes a rank growth, both spring and fall. (3) A pasture once set in it is for life, and there is not the expense of preparing a seed bed and furnishing seed every year or two, as with other grasses. I know many pastures of this grass that are from 25 to 50 years old and upward, and there is not one of them that could be improved by plowing up and re-seeding. (4) This grass grows rapidly in cool, wet weather, and yet it is very nutritious when young, and cattle will fatten on it early in the season, when on a clover or timothy pasture of equal growth they would scarcely make a living. (5) It is less injured by tramping than any other grass, and with these qualities it is a first-class early pasture grass, and will usually give a full month's good feed before either clover or timothy should be grazed. The fall rains start a second growth of it, which furnishes nutritious pasture until covered with snow, and the grazing season is again lengthened, often as much as six weeks. I believe in full feeding of dairy stock, and always grow roots for winter feeding and a supply of sweet corn for bridging over a summer or fall drouth, but in connection with these I want also a good permanent blue-grass pasture, and recommend that every farmer on whose land this grass will grow should have a few acres of it.

There are two varieties of blue-grass (*Poa pratensis* and *Poa compressa*), both of which are native in Canada, and flourish just as well here as in any part of the American Union. They are unequalled for hay or pasture, and they should not be ordered to go until their superior is discovered. Many farmers have failed to raise a permanent pasture because they believe that it needs no top-dressing with manures or fertilizers. This failure is evidently not the fault of the grasses. Why should not our Northwestern grasses be tested in this Province in preference to foreign varieties? Is it because they have no pedigree? Must our native blue-grasses go for the same reason?

With reference to soiling, a word seems to

be in place. If your special summer food for stock is grass, several varieties are advisable, if you can get them to grow; but if you put particular stress on soiling, using a variety of fodders, don't be so particular about the pasture. Many of our best farmers soil to such an extent that they put twice as many cows on the pasture as it would naturally support.

Mr. Graham says "the grain certainly impoverished the soil more than the pasture." We can hardly expect that he has found this out by experience, and he should be careful not to theorize so long as he accuses others of the same fault. Let us examine his statement. As we don't know how much milk his cows give, or the increase in live weight of his steers, we will go by general averages, which will prove nothing if the debits and credits show little difference, but if there is a wide margin, the question will be settled.

It will be fair enough to consider his whole stock as milch cows, as they take as little substance out of the soil as steers. One season his pasturing was equal to one animal for 4,370 days, and 30 lbs. of milk per day will be a good average yield, making a total of $4370 \times 30 = 131,100$ lbs. of milk. Milk contains an average of 3¾ percent of albuminoids, which contain 16 percent of nitrogen, so that $131,100 \times 03\frac{3}{4} \times .16 = 786.6$, which represents the total nitrogen taken from the soil. Milk contains an average of .68 percent ash constituents, so that $131,100 \times .0068 = 891.48$, which represents the total mineral matter taken from the soil; but as this is valued in our fertilizer markets only for the percentages of phosphoric acid and potash which it contains, it would be just to make the calculations accordingly. Average milk contains .40 percent of phosphate of lime, the latter yielding 46 of phosphoric acid, so that $131,100 \times .0040 \times .46 = 241.22$, which is total pounds of phosphoric acid removed from the soil. Milk averages .18 percent of muriate of potash (chloride of potassium), so that there will be removed from the soil $131,100 \times .0018 = 236$ lbs. of this fertilizer.

Now let us compare these results with the exhaustion of fertility produced by the barley crop. The same year he obtained 680 bushels of barley from 25 acres, equal to 544 bushels from 20 acres (the size of his permanent pasture field). This also yielded $28 worth of straw, which, according to his valuation, is equivalent to 34 bushels of barley, making a total of 578 bushels; $578 \times 48 = 27,744$ pounds. Barley contains 10 percent of albuminoids, which contain 16 percent. of nitrogen, so that there will be removed from the soil $27,744 \times .10 \times .16 = 443.9$ lbs. of nitrogen, against 786.6 lbs. taken from the soil by the milk. Barley averages 2.2 percent of ash, there being therefore taken from the soil $27,744 \times .022 = 610\ 37$ lbs. of ash, against 891.48 lbs. removed by the milk. This ash contains .72 percent of phosphoric acid, the amount of this constituent removed therefore being $27,744 \times .0072 = 199.75$ lbs., against 241.22 lbs. removed by the milk. Of potash, the ash contains .48 percent, so that barley removes $27,744 \times .0048 = 133.17$ lbs., against 236 lbs. of muriate of potash taken from the soil by the milk. The difference between the potash and the muriate is not so great that it is necessary to draw a distinction.

These figures prove that milk is much more exhaustive on the soil than barley, and this factor in the calculation is of immense practical importance. There are two other factors which make permanent pastures still more unprofitable; (1) the droppings of the cows are not so effective from a fertilizing standpoint as the same fertilizing ingredients if they had been left in the soil instead of being converted into manure, principally for the reason that the droppings are not evenly spread over the surface of the soil, and (2) more fertility, in many instances, is drawn from the atmosphere by cultivated crops. These figures disprove the great advantages claimed for permanent pastures, and the sequel is clear that temporary pastures must produce heavy losses, basing the calculation on Mr. Graham's figures. We should like to know if Prof. Arnold took these figures into his calculation when he said that the profits of good arable land were six to eight times greater than those derived from permanent pastures.

PRIZE ESSAY.

Can Mixed Farming be so Changed that more than the Ordinary Amount of Work may be Profitably Done During the Winter Months?

BY JAMES SHANNON, WOLVERTON, ONT.

Under the old *regime* of mixed farming, as it has been, and is, understood to consist of raising to sell a few horses and cows, sheep, pigs, poultry, beef, cheese, butter, fruits, roots, corn, rye, oats, barley, wheat, beans, etc., etc., little can be done toward equalizing the work between summer and winter, more than to get things into a state of readiness during the winter months for the campaign when spring arrives.

Of course such work as threshing and hauling grain to market may be postponed until freezing weather. A certain amount of manure may be handled also, and many other things done which would come under the list of preparations for spring. As the state of the times is no longer what they were, when it seemed necessary for every farmer to raise a little of everything, in the hope that something would succeed, I wish to confine my observations to the present and prospective order of agricultural affairs. Modern inventions and facilities for transportation have created keen competition the world over, which, in all probability, will be heightened in the future, so that the cost of production will be the all important factor in the matter of profits. Let us bear in mind also that farming is no longer to be based upon luck, but upon science.

Taking this view of the matter, it is readily seen that the character of mixed farming must be greatly changed or reduced in the number of productions—these to be selected with the utmost care to personal capabilities, and the natural advantages in each case.

In order, then, to reduce the cost of production to the minimum, and also to equalize the work more nearly throughout the year, as well as to build up the soil, the true policy to adopt is to keep more and better stock of whatever species is best adapted to the lay of the land. This will require a larger area to be kept under grass and clover. It will at the same time reduce the amount of tillage and team work to be done, and render more profitable that which is done, on account of the growing fertility of the soil, which is the sure result. This should be the constant aim of farmers, to increase the productiveness of the land they till, as it is their bank from which dividends may be expected in future years. I am aware that many will shout out objections to any sentiment in the direction of the advocacy of specialties in farming. But the tendency of the times is most unmistakeably in this direction. My own theory and practice in this matter is to reduce the lines of production to the lowest point conformable to the requirements of rotation.

However, after all that can be done towards making profitable winter employment on the farm, in our climate, this season will always remain one of comparative leisure to the farmer. This leisure may be turned to profitable account in storing the mind with facts and ideas, and improved ways of doing things, to be applied when time is more precious.

The knowing how and when to do all kinds of farm work without hesitation or doubt, is also another matter of great importance in the question of the cost of our productions and the saving of time. As the mind cannot retain the many good things that may be read during the year, it is necessary to classify and arrange, so that we may have a good stock of shelf knowledge at our disposal, and at a moment's notice. This may be pleasantly and profitably done during the leisure of winter.

Canadian and Colonial Exhibition.

Now that this great exhibition is closed, leading journalists in Britain and the Colonies are beginning to speculate as to the effects on Imperial and Colonial agriculture and commerce, not to mention the political prospects. The Imperial Federation League is becoming a powerful organization, and has already made its influence felt in British politics; but our politicians are fighting shy of the question. The agricultural and commercial aspects should be of the first consideration, and the establishment of satisfactory trade relations is an issue of extreme practical importance to our farmers. The adoption of the decimal system of coinage and of weights and measures by Britain and the Colonies would be the first step in the right direction. That the great exhibition has already developed sympathetic relations needs no further proof, and the way is now clear for the exchange of the products of the soil and the factory. The trade should have natural growth, and nothing would mar the harmony and prospects more than placing it into the hands of the politicians. The Canadian Gazette, published in England, which takes a deep interest in Imperial and Colonial affairs, and has critically investigated the nature of the displays, makes the following allusion to the exhibition:

Canadians cannot, indeed, too often remember that while individual enterprise is essential to substantial progress, it is as members of a united country that they will best make their mark in all relations with the outside world. For emphasising this point, Canada is much indebted to the exhibition just brought to a close. It is, of course, early as yet to speak of the full commercial results of the exhibition. The earliest intention of the Canadian authorities was to give the contribution from the Dominion a distinctly practical character, and those who have followed our articles from week to week will not hesitate to affirm that this intention has been fully carried out. In whatever department one looks, the same extension

of commercial relations is indicated. It is, of course, inevitable that enthusiasm should in some instances have outrun discretion, and openings for Canadian trade have been talked of where no chance of competing with the present supplies could possibly arise. But such ill-advised utterances have happily been brought to the test, and fully discounted by the crucial examination and inquiry that have been made on all hands by British and European, as well as by Canadian authorities. It is, indeed, not too much to say that there can now exist little doubt as to the direction in which Canadian manufacturers, agriculturists, and men of business, may expect to find profitable employment for their energy and capital in the supply of other than home demands. Thus, we now know, with more or less exactness, on what lines Canadians can hope to reach the consumers of the United Kingdom and of Europe. Generally speaking, Canadian agricultural products may find in Europe markets to an almost unlimited extent. All the hard wheat that the Northwest can raise beyond the needs of home consumption, and all the dairy products and live stock that the various Provinces can export, will find a ready market here; while the fruits of Eastern Canada generally, and the fish products of the Maritime Provinces, are daily seeking new outlets with encouraging prospects. The woods of New Brunswick, of Ontario, and of British Columbia, already find their way to Europe in immense quantities, and yet the investigations carried on in connection with the exhibition have clearly show the possibilities of greater developments than have even been dreamt of in the past. The coals of Nova Scotia and of the Northwest are needed at home, but the various ores found in nearly every Province may meet in Europe with a profitable demand. Canadian manufactures, again, afford, in many respects, a prospect of extended commercial relations with Britain, and with British Colonies. Australasia is almost an untouched field for Canadian exports, and the little inquiry that has as yet been made shows it to be one of great possibilities to Canada as well as to Australasia itself. Indeed, if the events of this year have done nothing else, they have proved beyond a doubt that little more than a beginning has been made in the development of Canada's national wealth. Canadians need but have continued faith in their ability to work out their own destiny, and their highest anticipations will hardly be disappointed.

But the exhibition has happily done more than demonstrate the commercial possibilities before the Dominion; it has also shown the advance in the higher pursuits with which Canadians have been busy during the last few years. Never before have Europeans realised that Canada has anything to teach the Old World in education and in fine arts. The idea of backwoods with only here and there a civilised spot, and the thought of interminable winters, have had too firm a hold upon the mind to admit of that. But to-day no one will question the high rank which Canada can justly claim among the progressive countries of the world in regard to her educational systems, and the artistic and literary products of some of her leading citizens. In the face of such unanswerable proofs as the Canadian section has afforded these prejudices have lost their semblance of reality, and such a result, though not perhaps so directly productive an commercial extension, is as fully important in its bearing upon Canada's future welfare.

In speaking of fat and lean steers, "Bell's Messenger" says: "Though each may weigh enormously for its age and race, the amount of eatable substance of the dressed carcass does not much exceed that obtained from the carcass of an animal in fairly good condition for slaughter at half the weight." This principle is what we have been advocating all through the "baby-beef" boom, and our stock manipulators must realize the fact sooner or later.

SECOND PRIZE ESSAY.

How can Greater Economy be Exercised in the Use of Fences?

BY EDWIN E. OLDING, WOODBURNE, N. S.

Farming is not haphazard work any longer. It has resolved itself into a systematic business which needs good brain work, and it refuses to be a successful business unless conducted upon a broad and at the same time an economical basis.

Economy is wealth. The person who can get along with the least fencing has more time at his disposal than one who has much fencing to look after. In the matter of economy in the use of fences, let us see when they are absolutely necessary. In laying off a farm, it is well to have the dwelling and barns as near the centre as possible—then we require a large barnyard, well fenced, a lane to the pastures, fences between the pastures and the cultivated land. These, with road and line fences, are what is necessary. In this Province of Nova Scotia, fences are necessary all along the highway, as herds of cattle, sheep and horses are allowed to wander along the roads finding pasturage as they may. If all farmers were required to fence their cattle in pastures, it would save miles of fencing along the highway, and the same may be said of railroad fences. It would be far better for the railroad company to give farmers a bonus to keep their cattle off the line than to fence the whole road. It could be managed in many cases without any more fencing, and the railroad would be less of a nuisance when it runs across cultivated fields, with its clumsy gates to open and shut and its fences taking up valuable space. Again, let the cultivated fields lie as much as possible in one block. It makes cultivation easier and no fences need be used inside the block, whereas each isolated field would need to be protected by a fence. The line fences should always be kept up. It is more economical to do that than to have quarrels for lawyers to settle.

In the matter of fences, durability is to be desired. A fence that will last 20 years is more economical than that which will only last 10 years, even if the former cost twice as much as the latter, because of the time and labor saved, while a fence that would last a lifetime would be proportionally more valuable. A man must see that his fences are not only proof against the attacks of his own and stray cattle, but are also built in such a manner as to render them durable at as low a cost as possible. Let us consider how this can best be done. In this country, where lumber of considerable size is hard to get, comparatively expensive, and smaller or second growth tolerably abundant, poles of from four to eight inches in diameter can be had at trifling cost. Anything from six inches upward could be got out in the winter, hauled to the mill and sawn into inch or inch and a half rails; these must be nailed securely to light and durable posts, which may be driven or sunk into the ground, according to the nature of the soil. This makes a cheap, lasting and neat fence; any poles less than six inches might be split or flattened to make them more durable, and put up in the same manner. The matter of posts is a serious consideration, as it is the ground work of the whole fabrication. The liability to rot or the upheaval with the action of the frost causes the greatest deterioration with which we have to contend. When economy of land is not necessary, as in dividing pastures or uncultivated fields, this difficulty may in a measure be overcome by securely fastening the foot of a post into a sill instead of sinking it. If the post must be sunk, it pays to get cedar posts, or to use some of Dr. Chase's practical and cheap methods. Posts prepared according to the following recipe will last a great number of years, and can be made rot proof for two cents a piece. Take boiling linseed oil and stir in pulverized charcoal to the consistency of paint; coat the timber with this. This is superior to coal tar used for the same purpose, though it costs just a trifle more. Fence posts must be well seasoned, and should be placed butt end up. There are other cheap preparations too numerous to mention; nearly all have something to recommend them, but it is best to use one that has been tried and proven.

To combine as much of beauty as is possible with the greatest utility, should be the aim of every farmer, and to apply this maxim to fencing it is best to consider all the available fencing material and to choose that best suited to the purpose and his pocket, always keeping the beauty idea in sight. If one has plenty of time, he might make a hedge protected with rails for the first few years, but unless prepared to keep it trimmed, it is as unsightly a division as can be made. A cheap and reliable hedge may be made by making first a mound of earth and planting on it spruce trees. These grow rapidly, and if the tops are sawn off every two or three years, after the trees grow to be three or four feet in height, they will form a thick and impenetrable hedge, requiring little care and not unsightly, as it is evergreen, and while common enough everywhere in summer, in winter the eye greets every green thing with gladness. It is also a good protection against cold winds, and from snow drifts along a road. Whatever is the best, namely that which best combines beauty, usefulness and durability, is the cheapest in most cases. Appearances are often deceitful, but if we were to judge farms by the appearance of their fences, it would be found that other things being equal, the farms with the best planned and best fences would yield the best returns.

The satisfaction we would have in looking at a nicely made fence is to be set against the feeling of discontent which a roughly made one inspires. Of what money value that satisfaction would be cannot be clearly shown, but it would add to the farmer's happiness, and whatever adds one grain to what is the greatest aim of man's existence, is immeasurably above money valuation. We must also keep fences in repair and let the repairing be well done, although when there is too much of a fence to be gone over, it is better to build new than to make the rest worse. Fences are necessary evils; let them be as few as possible, as well made as your materials and purse will allow, and as cheap as is consistent with economy and beauty. If you do not wish or cannot find wood at hand to make fences, there is the barbed wire or the Everett fence made of slats and wire, which is snug and easily transported. Its cost is reasonable, but much more than that of the fence we have described. Fences require much consideration on the part of the farmer, and every one must do his own particular thinking to suit his farm and himself, and only generalizations, of the subject are of use here.

Mixed vs. Special Husbandry.

As our prize essayist has pointed out, the tendency of our system of farming must be more towards specialties. The days of growing a little of everything and a great deal of nothing are, or should be, numbered. It is not extremely difficult to hire a man who is tolerably expert at a number of farm jobs, and many farmers may be equally successful, but these are the days of machinery—the future will be more so—and it comes very expensive to keep a machine or an implement which is not used more than a week or two in the year. Besides, there is now a great deal to be learnt in every department of husbandry, more, in fact, than any ordinary farmer can make a special study of, and there are few soils or localities which are equally well adapted to a great variety of productions.

The only significant objection which we have heard against specialties is that a systematic rotation of crops cannot be efficiently carried out. This is a weighty consideration for the farmer who is a mere laborer, but it has little weight for the one who is a diligent student of the principles of his profession. There are two main systems of rotation, the one rotating the crops and the other rotating the manure, and it makes little difference which system is made the chief object. When the same manure with the same constituents leached out is put on the same land year after year, an extensive system of crop rotation becomes an absolute necessity for profit, otherwise the soil would soon become exhausted of one or two of its essential constituents, although it may remain fertile in other respects. When the lacking constituents are once found, a rotation of manures will prove much more effectual and economical than a rotation of crops. Special manures are now abundant and cheap in our leading markets, and all that is required to inaugurate a system of special husbandry is a knowledge of how to use them to the best advantage—not neglecting the proper use of stable manures. Stockmen urge the necessity of keeping more stock to produce more manure. The farmer who understands the first principles of agriculture will at once see the fallacy of this cry, for stock cannot return as much to the soil as it abstracts, and in our present system of husbanding the manure, stock is a great source of soil exhaustion instead of recuperation, unless large quantities of bran, oilcake, etc., are bought and fed on the farm, which is certainly a ridiculous system of husbandry. It would be more sensible to plow the grass under, instead of feeding it, for then there would be no waste, and fertility would be much more rapidly restored. The best practice has been to hurdle sheep on poor land, feeding them with rich foods, but this practice is giving way to the use of special manures. A combination of these various methods often proves advantageous.

In selecting special lines of husbandry, the locality and the character of the soil are of primary consideration, and the natural productions should harmonize with the personal inclinations of the farmer. If he is inclined to dairying, he should have good grass land, and if he prefers fruit growing as a special study, he should have a suitable soil and location. There are some branches which fit well together, there being a more equal distribution of labor throughout the different seasons. We know of no better fitting and profitable branches at the present time than fruit-growing and winter dairying.

Poultry.

Gapes in Fowls.

The fact that the disease known as gapes in poultry is produced by a parasitic worm (*Syngamus trachealis*), which infests the trachea of the birds, was settled long ago, and for most of our recent knowledge of the worm and the disease we are indebted to the prize essay of Pierrie Megnin. According to this author, the mature worms and their eggs are coughed out of the throat of the infested fowl, and the disease is spread by its associates picking them up along with their food or by drinking water in which the eggs may have hatched into larvæ. No suggestion is allowed of any intermediate host. Mr. H. D. Walker, in an apparently carefully prepared paper on this subject (Bulletin Buffalo Society Natural Sciences, v.,.pp. 49–71, 1886) details many experiments which he has tried, and several of them point very strongly to the conclusion that the earth worm may, in many cases, play a part in the distribution of the pests. The embryos have been found living in the earth worm at all seasons of the year, and earth worms from infested localities, when fed to chickens, almost invariably produce the disease. Dr. Walker has also produced the disease in robins, and claims to have found the embryo of the lung worm of calves (*Strongylus micrurus*) in the earth worm.—[American Naturalist.

Poultry and Fruit Trees.

I have many times in my writings on poultry called attention to the excellent results that followed from having poultry stock run among the fruit trees, says G. O. Brown, in American Farmer. No doubt many have been deterred from following this course, on account of the destruction by picking the fruit that has fallen, by the hens. The stock, when the fruit in the fall commences to ripen, need not be confined there any longer, as the good they are kept there for has been already accomplished—the destruction of the larvæ of insects, etc., that are so injurious to the trees and fruit, as an incentive to farmers to try the method I cited. The well known incident of a Frenchman, who was a very enthusiastic horticulturist, devoting his time to improving many varieties of fruits, whose success was marked, with the exception of plums—and the trees of this fruit were easily brought to bearing, but none of the fruit would properly mature. In his disgust and disappointment he had decided to cut all the plum trees down, when a friend suggested the propriety of turning the plum orchard into a large chicken-yard, leaving the trees for shade. The idea was adopted, and the first season thereafter the owner was greatly surprised to find a fair crop of plums had matured and ripened, and the second season the limbs of the trees actually broke down with the yield of fine fruit. The hens and chickens kept down the destructive curculio, and it is said this is the secret of the great quantity of French and German prunes that are imported into this country. There is no excuse or reason why this country should not have plums to send abroad as well as apples. Some doubting Thomases may think the evidence of these results is a good way from home; to such I most respectfully call their earnest attention to the following I recently clipped from the Maine Farmer:

"J. B. Walker, Esq., Turner, set out plum trees eight and ten years ago, which have borne but little fruit. A year ago he enclosed them in his hen yard, and a few days ago from a single tree of the Smith's Orleans he picked four and a half bushels of fruit, and from a Bradshaw three bushels."

This is a branch of fruit culture that will pay better than oranges—as you get a crop of chickens and eggs additional to the fruit.

Hens in Snow Time.

When the snow is knee-deep and everything sealed with ice, hens will require the best of care. A hen is as helpless in the snow as though she had no legs at all. She must have some place, however, where food, water and the dust-bath are accessible, for she will not lay if compelled to crouch on the floor beneath the roosts. With snow on the ground the world is a wilderness to hens; they have no inducement to lay, and will quickly defer egg-production until spring invites them to begin. The food at such times should be given warm, and on boards. A clean place should be made for them, and the house rendered as comfortable as possible. The main factor in egg-production in winter is warmth and dryness. It may involve labor to remove enough snow to afford them room, but it must be done, or there will be no eggs. The value of a good, warm shed will be more appreciated by the hens when snow is on the ground, for they prefer to be in the open air during the daytime, and their health is greatly improved thereby.—[Am. Agriculturist.

As the result of the experiments with ensilage at Rothamstead, Sir J. B. Lawes arrives at the following conclusions: "(1) That the crops which had been cut green and placed at once in the silo could be preserved for several months in a state suitable for food for stock. (2) That during fermentation in the silo, som- of the nitrogen of the fresh food was destroyed, while another portion was changed from the albuminoid form to compounds of a lower food value. (3) That there was a considerable loss of other food compounds, amounting probably to about one-tenth of that contained in the crops when placed in the silo, while on the other hand there was no clear evidence that during fermentation any food was produced from substances which were not foods when placed in the silo. (4) That with very few exceptions, cows took readily to the silage, and when used with appropriate food—although slightly inferior to mangels—it proved to be well adapted for dairy purposes. (5) That when used with cakes and corn for fattening oxen, it proved to be quite equal to swedes and clover hay, used with like quantities of cake and corn."

The Dairy.

A Glance at Our Dairy Industry.

The winter season being the time for discussion and making preparations for the succeeding spring, our farmers should now be well informed in matters of fact in order that they may arrive at correct conclusions. That our dairy business must make rapid strides, and undergo great changes in the near future, may be regarded as certain. Already, where much stock is being raised, cheese factories have been turned into creameries, and the systems of butter-making are undergoing radical changes, although our cheese makers, so far as the system of manufacture of this product is concerned, have little change to hope for, their reputation being firmly established in the leading markets of the world.

In butter-making, however, there are many live issues, and the course of events cannot be predicted with certainty. If intelligence prevail over booms, our future course is clear. We will then adopt the best methods, no matter from what source they spring. In Europe, where the business is reduced to a science, the centrifugal separator is largely in use, and there is no reason why dairy farms, with 25 to 100 cows, should not be dotted over our own country. The centrifugal system is inapplicable where the milk must be gathered from a large circuit of farmers. It does not pay to procure a separator for less than 20 or 25 cows; but the hand separators, which are gaining ground in Europe, are admirably suited for smaller dairies, and are within the reach of the average farmer. The hand separator skims from 20 to 22 imperial gallons per hour, with little more effort than is required to turn a grindstone. The time has now arrived when the farmer can milk his cows in the morning and convert the milk into butter in time for breakfast, about two hours after milking. This is as it should be in a progressive age, and it is quite likely that the system will advance in popular favor in localities where much stock is raised, for the skim milk can be fed warm from the cow, it being then in the very best condition for feeding, and will produce almost as good results as unskimmed milk.

But our creamery men are so chained to the present system of cream-gathering that it is likely that their demands will prevail, although they are convinced that many obstructions yet lie in their way to success. They cannot dispense justice to their patrons owing to the difference in the qualities of cream delivered; they cannot procure the cream in the best condition for butter-making, some being sweet and some sour, and there are always a few uncleanly farmers in every community, the quality of whose cream is enough to deteriorate the whole batch of butter. The virtue of our creamery butter consists in its uniformly good quality, but if the same skill were uniformly applied in private dairies the quality would be uniformly superior. Some dairymen, from interested motives, deny this, but to say that better butter cannot be made when all the conditions are under the control of the maker, is to say that butter-making is a random business, there being no science in it.

It is in place here to glance at what our Governments are doing in our dairying business. Our Ontario Government deserves great credit for the manner in which it is opening out markets for our dairy products at the Colonial Exhibition. Mr. J. W. Robertson, professor of dairying at the Model Farm, is bringing the matter prominently before the British public by numerous contributions to the press, by lecturing and interviewing. It is a remarkable feature in our system of agricultural education that Mr. Robertson has been taken from the vat and the churn and appointed professor of dairying, thus overstepping those who have had a college education without practical experience. His success will be worthy of note in making future appointments. He is resolved upon managing the business in his own way, and is willing to adopt the best methods that can be obtained. He enjoys greater confidence amongst our farmers and dairymen than all our previous professors of dairying combined, and he is a diligent student of the principles of his profession.

The Dominion Government have also meddled with our dairy business. We condemned their policy on a previous occasion, but they have not heeded our warning, and they are still persisting in the same policy. They engaged Mr. W. H. Lynch, a vendor of patent dairy apparatuses, to write a pamphlet to be distributed free amongst our farmers. We condemned the principle of educating our farmers in this way, and we also pointed out the fallacies in the author's systems of dairying. We have just received a copy of a new and revised batch of this literature. We believe that the agricultural and dairy journals of Canada are doing all that is practicable in the dairy education of our farmers, and the Government have no right to tax them for what they do not want or need. What the Dominion experiment stations will do for our dairying interests remains to be seen. Our expectations are not very sanguine. It remains with our dairymen to apply the truths which have already been demonstrated, and we therefore see little or no new work that can advantageously be put into the hands of scientific experimenters.

Canadian Dairy Products at the Colonial Exhibition.

The British journals are teeming with reports about the Canadian exhibits at the Colonial Exhibition, and all with one voice speak in the highest commendatory terms of the quality of our exhibits. This is not only flattering to our farmers and our country, but it must also add greatly to our agricultural prosperity in the future. The English markets demand the best of everything, and when it once becomes generally known that Canada stands pre-eminent in the production of such a quality, Canadian productions will rise in price, and the demand will be constant. These astonishing results do not fall to the due of the honesty and intelligence of our farmers alone; our soil and our climate bear their share of the credit. Now is the time to push the business. We quote the following from the agricultural writer of the *Morning Post*, who made a thorough inspection of our dairy displays:

First, as to the butter. That which was tried was two months old, and had been for ten days (and ten days of heat) in the Exhibition. It was not at all salt, the natural texture was well preserved, it was well and solidly worked, and of fine, meaty flavor. It was equal to our best butter, and this, it is said, can be placed on the English market at 1s. a pound. There was none better at the London Dairy Show. The Canadians are trying hard to meet the markets in this country, and this butter will be imported fresh in 5 lb. tins, which can be obtained regularly by the householder. But it was in the cheese department that the greatest perfection has been obtained. Here there are in all some 400 cheeses, all made on the Cheddar system, and all of a uniform high quality. Out of the 1,000 cheeses shown at Frome last month it would have been impossible to have selected 50 cheeses of such a uniform quality as the 400 on exhibition at the Canadian Court, while the first prize winners at that show would have been run very close indeed by most of the Canadian. The cheese shown vary in size, the "truckles" being about three or four pounds smaller than those usually made in the West of England, and the ordinary sizes weighing about 50 lb. to 70 lb. against the 80 lb. to 100 lb of the deep Cheddars of the West of England. The Canadian cheese is also earlier in maturing than our own Cheddars, the cheese in the Exhibition being about six weeks old, and being then well matured. At that age our English cheese would be still soft and curdy. The Canadian cheese is mellow, silky, and meaty to the palate, solid in body, and of fine grain and texture, is rich and nutty in flavor, and is shapely in size, clean in appearance, and smooth and clear in the skin. It is a great pity that at the show at Frome a few lots of Canadian could not be sent for competition, for it would prove such an "object lesson" to the farmers of the West as they would not soon forget. This exhibition opens up a very great question for the English cheesemonger, and that is how it happens that Canada has been able to produce so even and high a quality of cheese. It is not in the factory system that the answer is to be found, for the United States has factories, and its cheese is much inferior to Canadian. Cheddar cheese has really become the world's cheese, and is made not only in various parts of Great Britain, but on parts of the Continent, in Canada and the United States, and in the antipodes. In the latter place, Victoria produces a higher quality than any other place. The subject of Cheddar cheese in every part of the world requires to be investigated, and a more useful work could not be undertaken by the Department of Agriculture at Whitehall. A good investigation would give such a mass of practical details that could not fail to be useful.

Major Alvord told the Boston milk producers that he had seen much pure milk which did not show 11 percent of solids.

An old milkman says in the Country Gentleman: Use cleanliness; never mix warm and cold milk; see that the animal heat is taken out before starting with the milk, and know that your cows have pure, clean water to drink.

The English dairymen are ahead of us in some respects, says Prof. Arnold, viz: In skill in feeding and husbanding manure. They feed very economically. If our dairymen would economize as well, they would get rich and make their farms grow rich at the same time.

Professor Weber has been analyzing some of the butter, so-called, sold in the Cincinnati market. One sample contained 20 percent of pure butter—all the rest a smaller proportion, down to 6 percent—the remaining 94 percent, consisting of lard, tallow, salt and coloring matter. Of the entire dozen of samples analyzed, the average contents of pure butter was a shade over one-tenth—nine-tenths being adulteration. This compound sold for from twenty to twenty-three cents a pound. It cost the retailer from eleven to twelve and a-half cents per pound, and probably cost the manufacturer from seven to eight cents a pound.

Cheese and Butter-Making in their Relation to Soil Exhaustion.

The relation of the different farm products to the exhaustion of the soil is a question of real practical importance, and if it were more thoroughly discussed and understood, many radical changes in our systems of agri culture would take place.

The question is very significant in our dairy interests. For instance, we often hear the remark that 10 lbs. of milk will make a pound of cheese worth 12 cents, while it takes 25 lbs. of milk to make a pound of butter worth 12 or 15 cents, showing that milk converted into cheese brings about twice as much money as the same milk converted into butter. This is probably the most superficial way the question can be put. Another step in advance is the consideration that calves can be raised on the skim milk, while whey, especially that obtained from sweet curd system of cheese-making, is almost worthless. If calves can be raised on skim-milk, the fact is not complimentary to the feeding value of butter-fat, and here the practice is in close conformity with the principles. Butter is a mere luxury, and its elements are so abundant in nature that none of them have a market value for fertilizing purposes. We must, however, except the small percentages of albuinmoids and mineral matter which find their way into the butter in the ordinary process of manufacture, an average of about one-half percent of the former, and a little over one-tenth percent of the latter. There is also a small percentage of fertilizing matter left in the whey. Thus we see that soil exhaustion is to be laid almost exclusively to the charge of the cheese-factory.

In the matter of butter-making, it makes some diffierence whether the butter is made on the farm or the cream sent to the creamery, the butter-milk being taken from the farm in the latter case. Butter-milk has almost exactly the same average composition as skim-milk, and it would therefore be to the interest of the creamery patron to mix as little milk as possible with the cream in skimming, providing a just method of testing the cream were adopted, for it is in the skim and butter milk that all the elements of fertility are contained, and all the elements of growth in man or domestic animals, the fats being merely an econmizer in connection with the expensive foods, and other fats are much cheaper than butter.

Let us now take a practical illustration and show by figures what the diffierences really are. We will select two farmers, A and B, both having five cows; but A sends his milk to the cheese-factory, and B makes butter on the farm. Let each herd of cows give the same quantity and quality of milk, say an average of 25 lbs. per cow per day for six months, or 180 days in round numbers, so that each herd will yield a total of $5 \times 25 \times 180 = 22,500$ lbs. Let us now pick out the fertilizing constituents of this milk which have been extracted from the soil, viz', nitrogen, phosphoric acid, and potash. Milk contains an average of about $3\frac{3}{4}$ percent of albuminoids which yield 16 percent of nitrogen, so that former A extracts from his pasture through the milk 135 lbs. of nitrogen. This milk will yield a little over 40 lbs. of phosphoric acid, and about the same quantity of potash in the form of the muriate.

Let us now convert these fertilizers into money. Millions of tons of these constituents are bought by farmers as fertilizers for their soil, the ordinary average retail prices being 18 cents per pound for the nitrogen, 8 cents for the phosphoric acid, and 4 cents for the potash, from which we derive the following account:

Nitrogen, 135×18	$24.30
Phosphoric Acid, 40×8	3.20
Potash, 40×4	1 60
Total	$29 10

If farmer A now wishes to restore the fertility lost by the sale of his milk, he must go to the market and spend $29.10 in fertilizers. It will not do for him to say that he can use barnyard manure for this would be fertilizing his pasture at the expense of the rest of the farm. A's pasture is therefore losing fertility at the rate of $29.10 per year, and if half this loss is taking place in his other fields, it should occasion him alarm.

How does B's account now stand? If he makes the butter on the farm, and utilizes the skim and butter-milk, his land would suffer no loss in point of fertility so far as his dairy business is concerned, which is equivalent to saying that if A's cows realize $29.10 more than B's, their actual profits would be identical.

Now if the milk of A's cows give 10 percent of cheese, which is about the average, and brings 10 cents per pound, he will realize $225, but we should deduct the $29.10 which he requires to lay out in manures or fertilizers to keep up the fertility of his soil, leaving a balance of $195.90. On the other hand, B's milk should yield 4 percent of butter or 900 lbs. for the season, and he must sell this at $21\frac{3}{4}$ cents per lb. in order to realize the same sum as A. Every farmer can make his own calculations as to the differences in the labor, dairy appliances, etc. In many instances the labor expended in making the butter would eat up the profits on the stock fed on the skim-milk.

From these figures we may deduce the general rule that the farmer who makes an exclusive business of milk production for the cheese factory can keep up the fertility of his farm by purchasing yearly one ton of fertilizers for every 8 to 10 cows, without raising stock to produce manure.

As an indication of the improvement being made among the farmers of the South, it is stated that agricultural clubs are being formed quite generally in South Carolina.

Mr. John C. Dillon, Amherst, former farm superintendent of the Wisconsin State College, was a strong advocate of the exclusive use of pure-bred bulls, but experience has taught him to change his mind. He now breeds from the best. One of the most practical and important questions in Canadian agriculture is: When will *our* Model Farm superintendent change his mind in this respect?

Professor W. A. Henry, of the Wisconsin Station, last summer kept six cows, three by pasturing and three by soiling, having the quality of the two herds as nearly equal as possible. The result was a product of 1779 pounds of milk from one acre of pasture, producing 82 pounds of butter, while one acre in soiling crops gave him 4782 pounds of milk, which made 196 pounds of butter. The pasture was one of the best blue grass pastures capable of carrying a cow per acre through the season under favorable weather conditions.

Stock.

Cost of Producing Fat Steers—Model Farm Book-keeping.

At one time we were under the impression that the experiments at the Model Farm were to be carried out on scientific principles; but circumstances have taken place which caused us to alter our views. The question was discussed at a meeting of the Experimental Union, and the professors took part in the discussion. We presented our views, but they were disregarded, and all of the audience who could not comprehend the subject strongly sympathized with Model Farm authorities. Prof. Brown, the practical professor, and all the scientific professors, with one voice asserted that the feeding experiments were purely practical. We pointed out that no experiments could have practical value unless they received scientific sanction. We then asked how it was that their field experiments were purely scientific, our object being to ascertain on what basis the authorities were working, but we received no satisfactory reply.

The Christmas fat stock show now being near, it is in place to inquire if the Model Farm book-keeping is conducted on practical or scientific principles; we mean the book-keeping relating to the cost of production of those steers which have been fed so very practically. We may be permitted to mention that the book keeping is under the control of the practical professor. This gentleman regards those farmers who conduct their book-keeping on the old plan as being as mule-headed as those who refuse to fall in with his "baby-beef" craze. Now that his "baby-beef" business is exploded, let us inquire if there is any redeeming feature in his system of keeping accounts.

The Model Farm fed eight steers for the Christmas fat stock show held in Guelph in 1884, and we clip the following table from the printed card which exhibited the cost of production:

COST OF PRODUCING FAT CATTLE PER HEAD.

1st year, including calf value, milk, and all other food, with attendance	$ 39 96
2nd year, food and care	57 77
Four months of 3rd year	20 88
	$118 61
Less profit realized on charging market prices for food grown on farm	42 88
Total actual cost of production,	$ 75 73

Being $4\frac{1}{2}$ cents per pound live weight.

The table also showed that the eight steers averaged 1688 lbs, and the cost of production was therefore, sure enough, $4\frac{1}{2}$ cents per pound, charging the cost of production of the food consumed, instead of the market price, and presuming that the figures are correct. With these data, any school boy can calculate that, the market prices being charged, the cost of production would be a trifle over 7 cents per pound, and as the same card states that the exportation price was then 6 cents per lb., there is a clear loss of 1 cent per lb., or $16.88 of a total loss on each steer. But, according to his method of valuation, there is a clear gain of $1\frac{1}{2}$ cents per lb, or $25 32 per head.

Now it is certainly a very practical question for the farmer to know whether there was a gain, in this case, if $25.32 per head, or a loss of $16.88. The question may be viewed from

various standpoints, but the easiest of conception is this, that if the Model Farm had sold th food consumed by each steer, instead of feeding it, there would be a gain of $42 88 per head ; in other words, it would have brought $16.88 more in the market than in the manger—less the trifling cost of hauling it to the market. We dare not deal with the manure, for the professor attempts to prove that there is a gain of $24 (should be $25.32 as above) without the manure. The professor's calculation also shows that, had he purchased all the food consumed, instead of only a part, there would be a loss per head of $16.88, proving that it does not pay to purchase food to fatten even "baby beef"—if his figures can be relied on.

One other fact is as plain as day, viz., that no ingenuity in book-keeping can change the actual profits realized in the transactions ; that is to say, no farmer can be made richer or poorer by changing his system of book keeping ; and we will not complain of the system adopted so long as the farmer clearly understands the true state of his business. What we complain of is this, that an attempt has been made to induce our farmers to believe that the profits of their fields should be credited to their stock account. It may be that this has been done in the interests of the live stock manipulators, but we rather feel disposed to attribute it to the practical professor's ignorance of book-keeping. We would advise him to adopt a more scientific system, both in his book-keeping and in the manufacture of his "baby-beef" for dog feed.

American Live Stock Exposition.

[By our Chicago Correspondent.]

That is not what they call it, but expresses it better than "American Fat Stock Show, American Dairy Show and American Horse Show," which is an awkward, wordy name and yet does not express the meaning, as poultry, butterine, cattle slaughtering and various other branches of industry are represented.

On the whole, the 9th Annual Chicago Stock Show was as good as its predecessors, and in many respects superior.

Conspicuous by their absence were the herds of John B. Sherman, John D. Gillette, and one or two others well known to visitors in other years. The pleuro-pneumonia scare had much to do with curtailing the display of cattle.

The cattle were younger than usual, and of better quality, there being a general absence of the big, patchy, fat animals which used to be so plentiful.

There were 230 cattle, about 300 horses, 240 sheep, of which John Rutherford, of Roseville, had 38 head, including Shropshire, Hampshire, Oxford, Cotswold, Leicester, Lincoln and grades. Of hogs, 108 were entered.

In the slaughter contest there were numerous surprises. The Wyoming Hereford steer Rudolph, which took sweepstakes in the live ring, offered but little competition for that prize in the carcass class against Plush, a ⅝ Hereford, ⅜ Devon, shown by John Gosling, for the Swan & Bozler Co., of Indianola, Iowa. The latter took first in his two-year-old class, and carried the grand sweepstakes ribbon. He was calved Sept. 13th, 1884, weighed 1,540 lbs., and gained 1.96. He was taken from rough feed last spring and fattened almost entirely on oats.

The Canadian exhibitors were: M. H. Cochrane, Hillhurst, Dominionist, ½ Angus, ¼ Shorthorn, ¼ W. Highlander, calved April 28, 1885 ; weight, 1,200 lbs., gain per day, 2.15 ; Crompton, ½ Angus, ½ native, calved April 26, 1884 ; weight 1,450 lbs., average gain 1.61, color red ; Mineralist, Aberdeen-Angus, calved Feb., 5, 1885; weight 1,405 lbs., gain 2.19.

J. G. Snell & Bro., Edmonton, Ont., were represented in the Shropshire sheep and Berkshire swine classes.

John Rutherford, of Roseville, Ont., showed some choice Hampshires.

Mr. Cochrane's Mineralist took first in the slaughter class for yearlings.

Snell Bros, Edmonton, captured first premium on the carcass of their Cotswold lamb, dropped April 20th, 1886 ; weight 130 lbs., gain per day, .64.

The sweepstakes carcass of mutton was shown by E. & A. Stanford, of England and Canada, the Southdown wether Challenger being the lucky sheep. He was dropped March 12, 1884, weighed 225 lbs., and gained .23.

Many of the cattle shown were sold to butchers at $6@$7.50 per cwt., but a man who sold several at those prices said he was selling better killing cattle at the stock yards at less than $5. He referred particularly to some animals that were covered with old fashioned "patches" of fat.

It is remarkable, however, to see how butchers and consumers alike have outgrown the old-time craze for excessively fat meat.

The dislay of oleomargarine and butterine was very appropriately made in the "Art Rooms" of the exposition building. It was immense in volume and exceedingly artistic in arrangement. The show cases and stands were wreathed with evergreens, and costly bouquets of flowers were prettily arranged. Attendants were numerous and were dispensing, on the choicest of cream crackers, samples of their products. Only a few visitors were smart enough to detect that the excellence of the crackers "smothered" the taste of the artificial butter. And yet, one cannot help thinking that the dairy people might well have profited by the examples of their more artful rivals. The dairy department, however, was not well filled, was not at all arranged ; the large room was cold and cheerless ; not a garland, not a posy, and virtually no attendants to welcome visitors. Had there been plates of crackers spread with pure, delicious butter, the dairymen might easily have beaten the bull butter men at their own game. Our country cousins should taken more pains to make their goods attractive, and not think to win public sentiment simply by abusing those who make and advocate the use of "proxy." There is much more to be gained by good natured argument backed by convincing proofs of the excellence of natural butter, than by ill-tempered abuse of its dangerous rival. If artificial butter is not what is claimed for it, the dairymen should hail with delight an opportunity to meet it face to face and have a fair, impartial comparison. At any rate they should not scorn the idea of making their displays as attractive as the other ; because careful attention to minor details always makes a good impression on the public.

The Wyoming Hereford Association had two animals—very noteworthy. One from a Hereford bull and Angus cow, and the other from an Angus bull and Hereford cow. The crosses occurred by the shipping of a lot of Angus and Hereford cattle together on shipboard. The prepotency of bulls is remarkably shown in both cases. Both are black with white faces, while the calf by the Hereford bull has the shape of the Hereford with horns, while the calf by the Angus bull has the Angus shape and is polled. They are two-year-olds, and the former weighed 1,820, while the latter was only 1,540 lbs.

The Shorthorn men did not come out in good force this year, but promise to astonish the natives next year.

Mr. Henry Wood, a leading farmer and live-stock authority in England, says:—"A gentleman from a distant county told me in the show-yard to-day that last year he was (to use his own expression) fool enough to send three valuable young cart mares to three different show stallions in very fat condition, and paid a high price for their service, and the result was that not one of the mares had a foal. During the present year two of the same mares were put to a highly-bred Shire horse, in fair, but by no means fat condition, and there is every reason to believe that both mares are in foal from the first service. Take a typical case of a fatted ram. A gentleman living in the south of England gave a very high price for the use of a first-prize yearling ram at the Royal show at Preston last year, but did not produce him a single lamb. Another ram, which he bought also at a high price, had not been fatted for exhibition, but it produced more than a hundred lambs in the season."

The future value of the colt depends much on the care it receives during its first winter, says the National Live-Stock-Journal. If kept in comfortable quarters and properly fed, it will thrive and grow rapidly, while on the other hand, if exposed to the cold and fed sparingly, it is likely to receive a check that it may never recover from. This very unprofitable method of treating colts is practiced on many a farm and brings its accompanying loss, the colts showing the effects of the neglect plainly when spring comes. If it was more generally realized how much is lost in this way, more pains would be taken to see that the colts have comfortable quarters, with an abundance of good nourishing food. Due care should be taken to see that the colts have a chance for plenty of exercise. There should be a well sheltered yard adjoining their stable, where, when the weather is not so severe, they can run out for some time each day. Their stable should be well ventilated and kept clean, for good fresh air is very essential to the health and thrift of young stock.

We are pleased to see that the Dominion Grange is following our policy in live stock diseases. At a meeting recently held in Toronto, a resolution was passed by which pressure is to be brought upon the Dominion Government to use measures which will result in protecting our farmers and stockmen from that insidious and destructive disease, pleuro-pneumonia, which is at present raging in Great Britain and the United States. The most decisive and effective steps should be taken without delay. It would be impossible to predict the amount of calamity to our stock interests that would be the result of a false step in this business. Now that our country is free from all manner of contagious diseases, the most stringent measures should be taken to protect and preserve our reputation.

Scattered Thoughts about Sheep Farming.

Numerous experiments have been made in England and Germany as to the relative merits of the hog, the sheep and the ox as economical food consumers. Sir J. B. Lawes places their merits in the order above named, but the Germans place the sheep below the ox as an economic producer of increase. This probably only proves a difference in the English and German breeds of sheep. The hog far surpasses the other domestic species as an economical consumer, this being partly due to the more concentrated nature of the food consumed, and partly to the greater capacity of the hog for assimilation. In sheep we should be guided by the English experiments, our breeds being derived from the old country.

According to these experiments, a ton of food after passing through the stomach of the ox has greater manurial value than the same food, quantity and quality, after being dropped from the sheep. This is an important item in discussing the cry of the stockman that more stock must be kept in order to produce more manure. It has been the practice to feed sheep on poor land to restore its fertility, in preference to cattle, but this appears to be somewhat inconsistent with the experiments above quoted. However, as the sheep's droppings are spread more uniformly over the land than those of cattle, it is quite likely that, all conditions being considered, sheep are more economical as fertility restorers than cattle.

Is it necessary for the average farmer to keep sheep? Yes, and no. If he depends upon luck, it may be advisable for him to grow a little of everything; if he has hilly, unarable land, a flock of sheep is a useful branch of farming, and if his arable land requires enriching, sheep will save a good deal of mind-work; but as the non-studious farmer hates to lay out money for food, he cannot restore fertility in this way. He may, however, enrich one field at the expense of another. The exhaustion of fertility is dependent upon two leading causes, (1) the quantity and quality of the products sold off the farm without purchasing foods or fertilizers, and (2) the method of husbanding the manure. In these days of tendency to specialties, the farmer who has been successful in dairying or stock-raising will keep more cows and steers in preference to a flock of sheep, but there are many farmers who have been successful in sheep husbandry as a specialty, and they can profitably stick to the business. But there is one notable feature which gives greater stability to dairying, viz., our reputation in the foreign markets against the increasing competition with foreign countries in sheep and wool growing.

Farmers who don't know enough to keep comfortable shelter for their stock in winter will succeed better with sheep than with cattle. Sheep delight in dry, cold weather, which makes our climate well adapted to sheep, while other stock should be protected from cold as well as from dampness. However, if the lambing season is in winter or early spring, it is necessary to have comfortable quarters for the ewes and the lambs. During dry, cold weather, sheep, if liberally fed, will flourish out of doors during the day, and they need abundance of exercise. It is against the nature of the sheep to be closely confined. It loves to be fondled, however, and no domestic animal is fonder of freedom. Its motto, if we may so express it, is "variety, kindness and liberty." The simple neglect of this fundamental rule often changes the balance to the wrong side of the account.

Sheep also delight in punctuality on the part of their attendant. Their expectations run high when meal time comes around. Lambs or growing sheep require bone and muscle forming food, and they should therefore receive foods rich in albuminoids and mineral salts, such as bran, peas or oilcake, not neglecting roots and coarse foods. The coarse foods are just as well uncut, but in this case the quality should be good. Full grown fattening sheep require more fatty foods, such as oat and corn meal. Give breeding ewes a variety of all the foods above mentioned. Sheep, though dainty creatures, are better without condimental foods; indeed, all domestic animals are better without them—except those fed for the show ring and for the production of flesh which is unfit for human consumption. Let there be free access to the food trough, in such a manner that there will be no crowding, the weaker suffering from the overbearing conduct of the stronger. Keep the beds dry, and let there be no waste from improperly constructed feed-racks.

If you have a hired man, your sheep may find out his character sooner than yourself. We will here let you into a little secret: Watch your man when he is in the sheep pen, and observe closely if the sheep tend to approach him or escape from him. This simple observation may often decide on which side of your sheep account the balance will be found. If he is in the habit of cursing and swearing, rest assured that he is bad tempered, and is not a fit companion for innocent sheep. He should take pride in the flock, should attend to his duties punctually, and should win the confidence and respect of every sheep and lamb in the pen. If you cannot give your man such a character as this, send him to the bush to chop wood, and attend to the sheep yourself.

Of course the scrub sheep, like the scrub cattle, should be weeded out every year; but be sure not to begin weeding out at the wrong end of the business. If your sheep business is a scrub (that is an unprofitable) industry, weed out the whole concern, and thus save yourself the trouble of testing your whole flock for scrub animals.

Feeding Apples to Stock.

In a previous issue of the ADVOCATE we explained the feeding value of apples, pointing out that their composition compared favorably with that of the sugar beet, having nearly the same average percentage of sugar. Although apples are valuable chiefly for their sugar, yet their acids make them an excellent appetizer and a very useful succulent food. Although they are suitable for all classes of stock, they are specially valuable for milch cows, if fed with suitable foods and in proper quantities. It is out of the question to feed good, marketable apples, but every farmer has culls which can be more profitably fed to stock than applied to any other purpose—although a few may be converted into cider for family use—the labor being much less.

In this article we shall dwell on the manner of feeding. The feeding should commence light, not more than 4 to 8 quarts fed once a day, and this quantity may be gradually increased. They should be run through a root pulper to prevent their choking the cows. They should then be mixed with bran, shorts or meal, any foods rich in albuminoids being the best, as they make up for the deficiency of this substance in the apples. A little experience will teach you the proper quantity to feed, care being taken not to feed too many. You will find them good for increasing the yield of milk in the autumn and winter seasons, when it naturally begins to fall off, and you will find an improvement in the quality of the butter. Horses soon learn to eat apples very readily.

The Scrub Must Go at Last.

Before giving him his walking ticket, (red, blue or yellow) you should learn to define what a scrub is. There seems to have been a misunderstanding between us and many of our stockmen as to the meaning of "scrub." Their conception of the epithet has been an unregistered animal, which doesn't fill the eye, although it may fill the pocket—for all they know about it; one which has never seen the mother land, and cannot point to an ancestor which enjoyed this high toned privilege; one, in short, which doesn't carry blue blood and red tickets. We, in our extreme simplicity, have always regarded the "scrub" as a domesticated quadruped of the bovine race which proved to be unprofitable in the sphere of life in which its lot had been cast. For example, the Jersey—a very profitable breed for the dairy—is a scrub for beefing purposes; the Hereford, a most valuable beefer, is a dairy scrub, and our native stock are scrubs for the butcher's block, while they have never been beaten in an honest contest at pail, vat or churn performances. Any general purpose breed is a miserable scrub on a 12 years' balance sheet. We peremptorily repudiate the idea that genuine profit consists in purchasing an animal at a fancy price and selling it at a fancier price. In such purchases somebody must suffer loss, sooner or later. True value can be based only on actual, honest performance.

These questions must now have great weight when pondering over the reports of forged pedigrees in the herd books of different breeds of cattle. The pedigrees now-a-days appear to be just as dishonest and unreliable as the records and performances, and the honest farmer does not know which way to turn in making his purchases.

In weeding out your scrub stock, whether by choice or government interference, you should endeavor to arrange matters in such a manner that the first attack be made on pedigreed scrubs, this being the lowest in the order for profits. We admit that the pedigreed animal is most apt to beget its kind, and this is the very reason why the weeding out should commence here. The pedigreed scrub is the most dangerous of all farm pests, and there should be a Chinese wall around the field which contains him, if he is permitted to exist, and be sure to bar the door of his winter quarters. A *registered* scrub is not so dangerous, for it may

have no pedigree, having been forged into the herd book.

We would advise you to pay special attention to honest performances, to test your own stock, weeding out all unprofitable animals, and if you can find an unusually profitable animal with an honest pedigree, cling to it for all it is worth.

Has Science Come to the Aid of Stock Feeders?

The season has now arrived when the greatest economy should be exercised in the feeding of stock, and every useful system should be taken advantage of. The time is also at hand when the question will be discussed by scientific professors at the Farmers' Institutes. We listened to some of the lectures of these professors, and we noted some objections which we deem it our duty to state in the interests of all farmers who are earnestly seeking after truth. A lecturer on scientific cattle feeding has also been sent around by the Government under the auspices of our Dairymen's Association, who has fallen into the same blunders as the professors.

It is a very inconsistent proceeding on the part of our Government that they should send around professors from the agricultural college to teach farmers scientific feeding, while the practical method is still maintained on the Model Farm, and the authorities, whoever they may be (we suppose the Advisory Board is now responsible), should be called upon to explain. Even the feeding experiments at the Model Farm are conducted on a sort of practical scale—in such a manner that science has proved them to be absurd. If the College professors are right, the Farm should be abolished; and if the Farm professors are right, the College should be abolished.

Science has done a great deal for the cattle feeder, but it is better that he should have remained perfectly ignorant of the fact than that it should be boomed up for more than it is worth. Unless extreme caution and superior judgment go with the science, more harm than good will be the result. Science has not clashed with the best practice in the economies of stock-feeding, and it is therefore reasonable to suppose that the former, when it goes ahead of the latter, is to be relied on, especially when it is known that the science is based on the most accurate forms of practice; for we find that the truths of science are the results of elaborate practical experiments in which all the known conditions are carefully weighed.

The basis of scientific valuation is the chemical composition of the foods. Any given product is divided into two leading heads, viz., flesh-formers (albuminoids) and heat-producers (carbo-hydrates). The former are nitrogenous compounds, and the latter, which include the fat, starch and sugar, serve for the support of fat, respiration and heat—although the former, when the latter are deficient, slowly decompose into fat, at the same time producing respiration and heat. It has been found by experience that any ration which contains one part of the flesh-formers to five or six parts of the heat-producers brings out the best and most economical results in the production of beef, dairy products or labor, and that a ratio of one to twelve or thirteen merely sustains life without increase. By these estimates, the foods rich in flesh-formers are the scarcest and most expensive, which closely conforms to ordinary experience and market prices. From these principles, it appeals to our reason that the feeding value of any food cannot be known until its place in the ration be ascertained; a food which produces profitable results in one ration may be unprofitable in another, the greatest profits being in the best balanced rations. For example, a food rich in flesh-formers will not be economical except when fed in a ration rich in fat-producers. The Model Farm has ignored these principles which are taught in the College, and has sought to prove that one cereal or root is better than another for feeding purposes generally, whereas it can be made better or worse according to the other foods in the ration.

The objections which we raise to the above named scientific lectures are these: The professors are far too arbitrary in their demands. It is plain that scientific feeding will never be a success until a more correct idea of analyses of the foods be known, which is as yet unattainable at the Model Farm, much less so by our farmers. The professors base their calculations on German feeding standards, and it is well known that the chemical analysis varies very materially in different soils, countries and climates. A heavy, or well manured, soil produces much richer foods than light or poor soils, and the geological formation from which the soil is derived materially affects the composition of the plants which grow thereon. There is also as much variation in the individual character of the animal as there is in the composition of the crop, and there are many other circumstances which tend to lessen practical value of applied science. In the by-products, such as bran, oil cake, etc., there is still greater scope for discretion, as one process of separation leaves the product richer than another, or poorer, as the case may be, and in the feeding of cooked foods the question becomes so complicated that we question if any of our professors can solve the problem.

The time and money which our farmers spend in obtaining these scientific lectures are thrown away—at least for the present. When our farmers begin to understand the effects of soils, manures, temperatures, method of harvesting, etc., upon the composition of their crops, and the various other conditions which change the agricultural values, with the exercise of sound judgment and practical experience, they will learn how to economize in the feeding of their stock. They should know nothing about scientific cattle feeding until they learn the nature and composition of soils and manures, and these are questions which they can turn into immediate practical account in all their operations in husbandry.

Feeding Work-Horses.

The following methods of feeding working horses, taken from a report in the "Country Gentleman," illustrates the differences of opinion existing between practical feeders in companies where a large number of horses are kept. The investigation arose from a demand for the necessary information, occasioned by the death of valuable horses from careless and ignorant feeding. These companies, although their methods differ in detail, seldom have sick or dying horses. The report reads as follows:

"You can't lay any rules down about feeding horses," remarked the proprietor of one of the largest livery stables in the city. "For different horses you require a change in the method of feeding. Large horses require more feed than small horses, and horses that work hard more than those that do little. But take a horse in good health, and, the quantity of food being regulated by the amount of work he does, I find that the best feed is oats twice a day with cut feed once a day. The latter is composed of corn meal, bran and cut hay mixed together. There is no necessity of feeding horses warm food unless they are sick, and while there are a great many kinds of horse feed invented and placed on the market, yet, like human food, the staple articles remain unchanged and form the best and most important element in the feeding of horses. If people allow themselves to be gulled into buying all kinds of concoctions and giving them to their horses, they have a perfect right to do so, but they ought not to complain if their horses become sick. There are no substitutes for hay, oats and corn. Now the latter is, in my opinion, rather too heating to be used much as feed during the summer, but I use it during the winter. There is no great secret in the way of feeding horses. All that is needed is to follow the plain simple rules and not adopt the suggestions of every one who comes along. A horse after all is much like a human being, and is apt to get sick from pretty much the same causes. If a man treats his horses as well as he does himself, the animal, as a rule, will get along very well. But this would not be a general rule."

THE METROPOLITAN RAILROAD HORSES.

The horses of the Metropolitan street railway are in good condition, in spite of the hard work which is their lot. It is supposed to be the most trying life which a horse can lead, and, as a rule, a few years' time uses up the best horse. This natural result, however, is overcome in this instance to a large extent by careful and judicious treatment. "We feed our horses," said Mr. Pearson, the president of the road, "on a mixture of corn, oats and hay, ground separately and then mixed. We find that this is the best food, and in the end the cheapest. There is no change of diet except in cases of sickness, and then the horses are physicked much as human beings are whose systems are out of order. We feed no long hay, because a great portion of hay thus eaten is lodged in the crop, and does not reach the stomach at all. You never heard of a racing horse being fed uncut hay. It interferes with their wind, and so of all horses that are used on the road where speed is a consideration. In the case of car horses, it is necessary that they should be kept going. For instance, on this road a horse works three hours and a half per day and goes sixteen miles. This is a day's work. Of course this three hours and a half is not continuous. There are short intervals of rest. But by feeding our horses three times a day with this feed and cleaning them well, we are able to keep them in good condition and make them useful for years."

THE FIRE DEPARTMENT HORSES.

"We feed on oats principally," said Chief Engineer Cronin of the fire department, speaking of the horses of the department. "We feed on oats and enough chopped feed to keep the bowels open."

"Do you feed any long or uncut hay?"

"We give the horse six or eight pounds to stand to at night, but the principal feed is oats; no corn meal. We give a horse a peck and a quarter or a peck and a half of oats a day; we feed them three times a day—morning, noon and night—giving them about half a peck each time. Then we give them chopped hay two or three days in a week. We feed our horses very much as race horses are fed. Our veterinary says that oats are best. You will find that the flesh of our horses is very solid. Oats make solid flesh and bone and muscle. Our horses, when they work, have to expend in a short time as much energy as other horses expend in a whole day's work. We could not feed our horses on chopped feed, as I understand some street railroad companies do. It might do for their horses, but it would not do for ours. Half a peck of oats in a horse's stomach is not like

half a bushel of chopped feed. The results of our system of feeding are very satisfactory. We never have a case of colic among our horses. The great thing is to give a horse sufficient, and to give it regularly. Water? Oh, we give them water when they want it! Our horses will halloo for it. If they are loose, they will go to the hydrant. We had a horse once that used to go to the hydrant and turn on the water for himself."

Fancy Prices of Live Stock.

A farmer called on us a few weeks ago and asked us to advise our readers to commence the raising of pure-bred Shorthorns on a small scale and gradually work up. He related his experience in the matter, and claimed that he made several hundred in the transactions of the past few years. We rejoice at his success, and he will always find us ready and willing to advise our readers to embark in any enterprise that will be to their advantage. But just here a word of caution is necessary. A few days afterwards we attended a public sale of Shorthorns, and the owner informed us that he lost one thousand in the enterprise. If we had advised him to go into the business, he would not have spoken very flatteringly of our judgment. While admitting that some farmers will make a success of almost any undertaking, while others just as invariably fail, there are other considerations which should not be overlooked.

The most important feature of the question is the ability to draw a sharp line between the market price and the intrinsic value of a given animal. It is well known that the market price is governed largely by the degree of prominence to which the breed is brought, and this may vary very materially from the intrinsic value, viz.: the worth of the breed based upon its actual performance. If, now, another breed is brought into greater prominence, the market price of the former declines, although its intrinsic value remains the same, and the loss on the whole deal is usually as great as the gain; neither the world nor the farming community becomes enriched, money merely being transferred from the pockets of one portion of the community to those of another. The dupe may have gained in that he has learned a practical lesson, while the successful speculator has lost in that his impetus for speculation has been stimulated.

We cannot help admiring the ability of the man who can foresee all these events, and whose speculations are almost invariably successful, but it hurts us to think that so many innocent farmers are tempted into the ring, whose only gain is a practical lesson in prudence. We would prefer a different state of affairs. We should like to see the difference in the market price of breeds bear a close relation to their intrinsic merits, by which rule both the buyer and the seller would gain by all the transactions. This event can only be brought about by an enlarged and systematic mode of testing, conducted with scrupulous honesty by men specially qualified for the business, and an increased effort on the part of our farmers to grasp the situation. The educational advantages would be immense, and the system would effectually put an end to the feverish state of the farming community incident to the prevalence of wild theories of stock speculators.

I would not be without your paper on any account, as I consider it a most valuable acquisition to any man's library.—REGINALD GEORGE ROGERS, Headingly, Man.

Garden and Orchard.

The Orchard in Winter.

When the work is very pushing during the summer season, there are some orchard jobs which can be profitably postponed until winter. With reference to pruning, a practical orchardist said, "Prune when your knife is sharp." This means that there is no special season for pruning, and winter, especially towards spring, may be taken advantage of in this branch of orchard work. To do the work properly requires skill and time, and when performed in winter, the branches cut from the trees can also be removed from the orchard, thus saving valuable time during the busier seasons. The work is not unpleasant on mild days when there is snow on the ground. Pruning in very cold weather should not be undertaken.

Another class of work which can be profitably done is manuring and mulching. If the orchard is in grass, well-rotted manure should be applied, and it may be spread on the snow from the sleigh. If the ground was plowed in the fall, without the intention of sowing a crop in the spring, coarse manure may be applied, which will act as a mulch and a fertilizer. If the orchard is located in a warm soil and has a southern exposure, so that the trees are apt to blossom too early in the spring, thereby being exposed to late spring frosts, it is advisable to place a mulch around the trees over the snow. This mulch will keep the snow from melting rapidly in the spring, thus keeping the soil cool and preventing too early a growth of buds.

Influence of Forests on Temperature, Moisture and Health.

Dr. Ernst Ebermayer, Professor of Forestry in Bavaria, states that for five years observations have been made in the kingdom of Bavaria, at seven different points, respecting the influence of forests on the temperature and moisture of the atmosphere, on the evaporation of water, and on the quantity of rain-fall, etc. The facts are based on five thousand different observations made during the years 1868 to 1872, with the help of instruments most ingeniously constructed for that purpose. With these twice every day, at fixed hours, and at all seven points, the temperature of the soil was measured for comparison, in the forests as well as the open fields, at the surface and at a depth, respectively, of one-half, one, two, three and four feet. According to these, the mean annual temperature of the forest soil is on an average, twenty-one percent lower than that in the open fields, and the mean annual temperature of the atmosphere in the forest is on an average ten percent lower than that in the open fields.

In regard to the effects of forests on the general health, Hon. H. Seymour says that the effect of forests upon the general healthfulness of the State is great. The philosopher Boyle long since stated that in the Dutch East India Island of Ternate, long celebrated for its beauty and healthfulness, the clove trees grew in such plenty as to render their product almost valueless. To raise the price of the commodity, most of the spice forests were destroyed. Immediately the island—previously cool, healthy, and pleasant—became hot, dry and sickly, and unfit for human residence. It is known that the general clearing away of forests in this country has had a tendency to raise the temperature in summer.

Dr. J. D. Hooper, of the Royal Kew Gardens, says that the presence of forests plays a most important part in storing the rainfall, and yielding up gradually to the streams a continuous supply of water. Moreover, the rain is retained by forests on the surface of the ground; it gradually permeates to the subsoil, and so feeds the underground water bearing strata upon which springs and wells must eventually depend.

Frozen Apples.

It is the general opinion, as a writer in the Ploughman remarks, that an apple once frozen is of little value; but this is not the case if it does not thaw too rapidly, and is not disturbed until the frost is entirely out. When it is discovered that a barrel of apples has frozen, the usual practice is to remove them to a warm place; and sometimes they are taken out of the barrel, and plunged into cold water. This is all wrong. When an apple is frozen, it should be left undisturbed until it is very certain that the frost is all out of it. If the apples are in an open barrel or box, they should be covered over, so as to keep them cool and in the dark; but, in doing so, care should be taken not to touch the fruit; for, wherever a frozen apple is touched, it will make a soft place. In fact, the simple rolling over of a barrel of apples will ruin it. In freezing, apples shrink so much that a barrel will not be full by nearly a peck. In consequence of this, rolling a barrel over bruises every apple; and every bruise will show when the apple thaws, and will soon begin to decay.

When apples are frozen in tight barrels, if they are not started until entirely thawed out, it will not injure them in the least, unless they chance to be in the open air, or where they will suddenly thaw out. When under cover in a tight room or a cellar, it frequently requires several weeks for them to thaw out. The second time an apple freezes, there is more danger of injury; but, under favorable conditions, an apple may be frozen and thawed three times without injury.

If an apple can be frozen in November, and kept frozen all winter, it will come out in the spring in the same state as it was in, in the autumn: it will not ripen while in the frozen state. Baldwins frozen the first of December, and kept frozen until the middle of March, will be too hard to eat the first of April, and in May will be about as ripe as they will be in January when not frozen.

Cider Vinegar.

The best of all is the good old fashioned *cider* vinegar. Formerly this was the only kind used, but since the manufacture of vinegar has become better known, it can be made so much cheaper that pure cider vinegar is almost one of the things of the past. Although the process of its manufacture from cider is so simple, yet few seem to thoroughly understand it. All fruit contains more or less sugar, and what appears most strange, some of the sourest fruits contain the most sugar, while the sweeter ones may contain very little. This is caused by the sugar being concealed by the stronger acids of the fruit, while in the sweeter

apple there is scarcely any acid, and the apple appears to be really sweeter than it is. The sugar, when the cider is expressed from the apple, goes with it. This sugar is the basis of the vinegar. The cider, when manufactured, should be placed in a clean cask or barrel one that is sour, but not musty, being preferred. This barrel must be put in a warm place, and the bung left out to allow access of the air, to form the vinegar. The air unites with the sugar of the cider, causing a rapid formation o a gas, that causes the cider to boil, as it were, by its escape. Fresh air being constantly added through the open bung, the process is rapidly continued until the sugar is converted into alcohol. A change now takes place. The alcohol which is formed is acted upon by the air and converted into vinegar, more rapidly, of course, under proper conditions than unfavorable ones. If the barrel is only filled half full of the cider and kept at a temperature of from 80 to 85 degrees and air freely admitted, and the barrel agitated by rolling, good vinegar can be made in a few weeks, but the flavor will not be as high as it would by slower making. When the barrel or cask is filled very full and but little surface is exposed to the air, the process goes on very slowly. If the cider is kept, as in a cellar, at a low temperature, the process is also much retarded, frequently taking more than twice the time to complete the making. The better the cider, the better the vinegar. That made from green and unripe fruit will never make a superior article, and in many cases will turn black and putrify in the barrel and be worthless Freezing is injurious to the flavor and quality of cider vinegar.—[Farm and Garden.

We have recently received a large number of letters about carp culture. We were advised to advocate the culture of carp in Canada; but the more we investigate the matter the less favorably impressed we are with the project. Some culturists have succeeded well for a while, but it is the end that tells. Reports of successes and failures are very conflicting. We cannot at present advise the farmers of Canada to go into carp culture.

The New York Times, in a forcibly written article against over-feeding stock, closes the long list of objections by the following remarks: Thus we have every condition for the outbreak of the prevalent diseases of the season. Fever of the lungs, congestion of the brain, inflammation of the intestines, disorder of the liver and spleen, carbuncular inflammation of the tissues, impaction of the stomach, or at the best a most fertile seed bed for the deposit of whatever germs of disease may be floating around in the atmosphere from near or distant plague centres, where these diseases are prevailing in a virulent and contagious form. The results are that pleuro-pneumonia, swine cholera, anthrax fever, splenic fever, under all common forms and names of lung fever, intestinal fever, Spanish fever, black quarter, bloody murrain, dry murrain, and the too common "mysterious disease, which baffles all the science and practice of the local practitioners," and which is always fatal, abound and bring dismay and serious losses to farmers and stock owners. Faults in feeding are very prevalent at this season, not to speak of the general ignoring of all sanitary conditions, and there are many circumstances which make it difficult to avoid these; but if our farm animals are to be preserved in health and these losses are to be evaded, these faults and neglects must be avoided.

The Apiary.

Races of the Honey Bee.

H. W. Lett, M. A., of County Down, Ireland, gives, in the Farmers' Gazette, the following sketch of ten different varieties of the *Apis mellifica* which are kept in hives:

I—BLACK OR BROWN. The ordinary hive or honey bee, called by the way of distinction, the black or brown, from being of almost one uniform brown-black color, with slight indications of paler bands on the abdomen, and clothed with grayish brown hairs. Until within the last fifteen years, no other bee was known in north or west Europe. This bee, after escaping, has made itself wild in the American and New Zealand woods.

II—ITALIAN ALP. The Italian Alp bee, sometimes called Ligurian, is indigenous to the mountainous district that lies in the north of Italy round about the lakes Magiore and Como. It is of a light orange yellow color, with two orange red bands on the abdomen, and is longer and more slender than the black. They are better honey gatherers, more hardy and prolific, and very courageous in defending their own hives, even from the ravages of the wax moth.

III—CYPRIAN. The Cyprians are natives of Cyprus and part of Turkey in Asia. They are yellow, quite slender, wasp-like, and smaller than Italians. They always have a yellow shield mark on the back between the wings. They are strong, excellent honey gatherers, winter better than any other race, and are proof against being robbed by other bees. But they are easily excited, and most revengeful stingers.

IV—SYRIAN. The Syrian bees are found on that part of Asiatic Turkey which lies north of Mount Carmel. They are of the same size, qualities, and temper as the Cyprians, from whom they differ in showing less yellow, and being on the whole of a grayer color over their whole bodies. They are quite distinct from the next variety.

V—HOLY LAND. The Holy Land, or as the natives call them, the Holy Bees, are found in Palestine, south of Mount Carmel. They are marked like the Cyprians, but their hair is so light in color they appear to be beautifully striped. Their size is smaller than Italians, but larger than Cyprians. They are very active and far flying, most wonderful cell builders, and get honey from red clover; but they are ready to sting, become furious at the least smoke, and run off their combs when one is lifted from the hive.

VI—TUNISIAN. Tunis, on the north of Africa, has a peculiar race of bees. They are the same in size as the Cyprian and Syrian, but their color is dark brown—even darker than the common black or brown. They are active workers, keep on the combs when being handled, and bear smoke better than other eastern races; but they are liable to attack a person coming near them, even though not interfered with.

VII—CARNIOLAN. The Carniolan bees are natives of Carniola, in South Austria. They are longer and thicker than the black or brown, being the largest domesticated European bee. The color is a rich, dark brown, nearly black, while each ring of the abdomen is clearly marked by whitish-gray hairs, giving it a silvery look. They are equal to Italians in honey gathering, fecundity and hardiness, while they are of a most remarkably gentle disposition, never attacking the manipulator, except when they are treated with improper roughness.

VIII—HUNGARIAN. The bees peculiar to Hungary are the size of, but far blacker than, the common brown. They are very fair honey gatherers, and as gentle as Italians, but their propensity to swarm renders them very uncertain and unprofitable.

IX—EGYPTIAN. The Egyptian bees are like Syrians in size, but quite yellow, like the Italians. They abound, both wild and in domestication, along the valley of the Nile, and while famed for good honey gathering qualities, are without exception the most ferocious bees known outside of India.

X—SOUTH AFRICAN. There is an excellent race of bees, both wild and hived, in the Cape Colony, which it is to be hoped will soon be introduced to our bee-keepers. They are the size and color of Italians, but grayer, while they are more tractable, and at the same time very prolific, and of remarkable working powers; where honey is to be gathered they keep at it early and late, and often are at work even by moonlight.

It is from the best of these races that the advanced bee-keepers of the world are now endeavoring to concentrate in one strain those characteristics which commend themselves as desirable in the best bred bee. And it may be safely stated that the honey bee of the future will be as superior to the bees known to us twenty years ago, as a pure Shorthorn is to an old brindled cow.

When taken out spread the manure at once on the field where it is to be plowed under in spring, says Waldo F. Brown, in the New York Tribune. I compost the manure in the barnyard, which is to be used on the garden or as a topdressing for wheat, but this shed-made manure I prefer to apply direct from the wagon when the land is frozen. Even if it does not do quite so much good, it saves labor at a busy time. Last winter I spread a part of the manure as we drew it out, but put some forty loads in a heap at the side of a field to be planted in potatoes. When spring came it rained so much and the land was so soft that we could not handle the manure at all when we wished to do so, and it gave us so much trouble that I made up my mind to spread in winter hereafter.

Mr. Henry Wood, in an address before the Wayland Agricultural Association (Eng.), makes the following allusion to the offspring of a Shorthorn cow which was over fed for exhibition purposes: "Mr. James How, of Broughton, Hunts, a tenant of our honorable chairman, had a matchless Shorthorn cow, called Lady Anne, one of the best animals ever seen. She won him 26 money prizes, 10 cups, and 4 medals, and bred three calves. The first, a bull calf, from a marked defect, was sold at a small price as a yearling. No. 2 calf was a heifer, and died when six months old. The third and last calf was born prematurely, and only lived a few hours. Thus, a priceless animal and her produce were lost, not only to the owner, but to the breeders of the country. Had the cow been kept in fair breeding condition, her progeny, and the produce of her produce, might have been available for the benefit of other herds. I may be told that, having won her owner so many prizes, she must have paid him in money. But, I would ask, how much did it cost to win those prizes?"

Veterinary.

Abortion in Cows.

The season is at hand when attention should be paid to this matter. You should bear in mind the causes to which abortion is usually attributed before any remedial measures are taken. As many as possible of the causes should be removed, even when there are no signs of abortion. The following are the most usual causes: A faulty construction or a diseased condition of the genital organs; knocks or blows against the belly; bloating; constipation or diarrhœa, or other conditions which produce straining; bad food, especially such as irritates or contracts the womb; the presence of sharp tasting plants in the food, or the effects of irritating medicines; feeding bulky foods which overload the stomach and press the womb backwards; feeding innutritious foods, deficient in certain constituents, by reason of which the calf dies; through contagion, as when a cow which aborts makes discharges from the genitals into the gutter, where they stagnate and produce minute plants which, on being set free, find their way into the genital ducts of other cows and produce abortion. By removing as many as possible of these causes, little danger need be apprehended.

There seems also to be other causes which baffle the ingenuity of the best veterinarians, and the question is receiving close attention in England.

Ergot in the grasses has been considered as a leading cause of abortion, but experiments have proved that the effects of this cause have been exaggerated. It is now not supposed that the quantity of ergot usually found in the English grasses is sufficient to produce abortion. It will be remembered that it was ergot in the grass, or rather in the hay, that caused the foot and mouth scare in the United States a few years ago, so that our farmers should look out for ergot.

The French Department of Agriculture are also examining the question, under the commission of M. Nocard. The Farmer's Gazette thus sums up his report to the Department:

Epizootic abortion, sums up M. Nocard, appears to be a microbian disease of the fœtus and its envelopes, and not a malady of the mother.

M. Nocard, however, hesitates to affirm absolutely that this is so. He awaits the completion of experiments still in progress before pronouncing a more definite opinion on the subject, which he reserves for a second report. The immediate aim of these experiments is to reproduce the disease in healthy cows by inoculating them with microbes obtained from the aborted animals, the animal liquor, &c., and of the affected animals.

The experimenter believes he has already acquired certain knowledge which is sufficient to suggest various practical preventive measures, and which he, therefore, hastens to publish.

The contagion, he thinks, is communicated through the genital organs of the dam, which, however, seems to be none the worse for the presence, sometimes prolonged, of the microbes. While believing that the contagion is imparted by this channel, he has not yet conducted sufficient experiments to prove that the microbes may not pass into the organism of the mother, through the digestive and respiratory organs, the action of which they may be able to resist, and thence pass to the fœtus.

Should M Nocard's inference, however, be correct—namely, the communication of the contagion through the genital organs—it would be comparatively easy to take effectual prophylactic measures.

1. The ground of the cow-house should be scraped every week, thoroughly cleansed, and watered with a solution of sulphate of copper (blue vitriol) in the proportion of 40 grammes to a litre.

2. Once a week the following mixture should be vigorously injected into the vagina of the pregnant animals with a horse syringe. The liquid should be thus composed:—Distilled water, 20 litres (if distilled water cannot be procured, rain water may be substituted); glycerine, 100 grammes; alcohol, 36 degrees strength; bichloride of mercury, 10 grammes. Dissolve the bichloride of mercury in the alcohol and glycerine. Mix this solution with the water, and stir well. This mixture (the bichloride, is, as we need scarcely warn our readers, a violent poison) should be kept in a wooden barrel, vase, or bucket, out of reach of children and animals.

3. Every morning the vulva, the anus, and the under side of the tail of all the pregnant animals should be carefully washed with a sponge.

4. Should an animal abort, she should be delivered immediately by hand aid, the fœtus and afterbirth should be immediately destroyed by fire or boiling water, and the uterine cavity should be washed out with eight or ten litres of the above liquid slightly warmed, and introduced through a caoutchouc tube inserted by the hand.

These delicate and difficult manipulations should, of course, be performed by a veterinary surgeon.

M. Nocard's experiments have necessarily been on a restricted scale, and will need more general trial for their complete corroboration. Nevertheless, he believes the measures he has indicated are sufficient to banish the disease, and they have, in fact, done so hitherto where they have, upon his advice, been put in practice.

Pleuro-Pneumonia in Britain.

The rapid spread of this disease in Britain and the United States makes the subject one of vital interest to our farmers and stockmen. The insidious nature of the disease is now becoming better understood, which gives occasion for greater precaution. Prof. Walley, in an address delivered before the Royal Veterinary College, Edinburgh, makes the following allusion to the disease:

For a century, or thereabouts, prior to 1842, pleuro-pneumonia existed in this country only in name, and it is now some 33 years since, on returning to my home after a prolonged absence, I first became practically acquainted with the malady; one of the first sights which met my gaze being nine valuable cows lying dead or dying in an outbuilding attached to the farm. It was a sight which at the time impressed me very powerfully—it was one I have witnessed, to a greater or less extent, many a time since in the pastures and farm steadings of Shropshire, Cheshire and Staffordshire, in the dairies of Lancashire, in the byres of Edinburgh and Leith, and in many other places. I have seen herd after herd, stock after stock, swept away—in some cases several times over—by this dire and hitherto uncontrolled malady. During the last thirty years fitful efforts have from time to time been made to arrest its course, and at this day we are still witnessing the application of every inadequate measure for its prevention and suppression. How long this is to go on, I know not; but of one thing I am convinced, and that is that until the Privy Council of this country determines upon the prosecution of more vigorous measures, and until the voice of the stock-raising community is heard demanding the initiation of such measures, pleuro-pneumonia will still continue the insidious foe and the decimating scourge of the bovine race in these islands. I have called the disease an insidious one—the term is no libel on its character. It is the most insidious, the most treacherous, and the most intractable of all the zymotic class of maladies.

In my early days there was neither let nor hindrance to the empirical application of remedies to the sick, or to the indiscriminate disposal of the dead or living members of contaminated herds; consequently, many animals that were wrongfully stated to have recovered from the malady and thousands of animals bearing the infection in their systems were scattered broadcast, and acted the part of firebrands throughout the length and breadth of the land. In my view, the question of the eradication of pleuro-pneumonia, any more than other diseases of the same class, is not a local question at all, nor is it limited to the discussion of any measures of local application. It is—and I have frequently during the last few years pointed this out—it is a national question. It is one which not only affects the agricultural community and the veterinary profession, but is of immense importance to the general public and to the state.

If we allow a death-dealing malady like pleuro-pneumonia to linger within our borders, and to stealthily creep among and infect our best herds, what can we expect but that one of our greatest sources of insular wealth will suffer a ruinous depreciation? It is all very well to boast that we have the best cattle in the world; but of what value will the best be to us when our foreign and colonial customers close their gates against us, and block up the only profitable outlets for our live produce? Can we blame them? Certainly not. The only wonder to my mind is that we have escaped so long.

The opposition to the adoption of vigorous suppressive measures has come mainly from the cattle interest of the country, and has been based largely on the assumed value of our pedigree herds; but of what value is pedigree if the cow or the bull bears in its system the seeds of a malady which is no respecter of pedigrees, of symmetry, or of form?

I am of opinion that this disease will never be got rid of except by the summary process of slaughtering, coupled with strict regulations in reference to the movements of animals, and thorough disinfection. The Netherlands Government gave every known method of supression a trial, and as we in this country had to do with sheep-pox a quarter of a century ago (after inoculation had failed), and with rinderpest, they had to resort at the finish to the radical method above mentioned.

In concluding this part of my address, I would ask to be allowed to say that, in my opinion, the regulations for dealing with contagious diseases in this country are very deficient in several respects. Firstly, in not being carried out by one central body; secondly, in the matter of prosecutions. Certain penalties attach to the breaking of the law, but an offender has only to plead ignorance, and to back up his plea by the corroborative evidence of his own hirelings or by that of his friends, to escape the punishment he deserves. In many instances the plea of ignorance is undoubtedly a just one, especially in the case of pleuro-pneumonia; and I think in order to ensure that punishment shall be meted to those who deserve it, the Privy Council should establish a universal system of licensing or registering the owner of animals, and should direct local authorities to supply all licensed persons with a brief and plain printed description of the symptoms of the contagious diseases peculiar to the animals so licensed.

If this were done there could be no plea of ignorance put in as a justification of neglecting to report the existence of contagious disease. Thirdly, I am of opinion that full power should be given to veterinary inspectors to slaughter suspected animals for the purpose of gaining satisfactory evidence as to the nature of any malady of a doubtful character under which they may be suffering. Fourthly, I regret to see that in the last Animals Order (1886) issued, the old mistake of sparing animals which have been exposed in fair or market with diseased animals is perpetuated. Such a regulation, especially in connection with foot-and-mouth disease and swine fever, is, in my view, a grave error. Fifthly, the permissive nature of many regulations renders them practically

abortive. Thus by the Animals Order of 1886 local authorities have the power given to them of prohibiting the introduction into their districts of animals from places wherein pleuro pneumonia exists, and in like manner they may prolong the statutory period of quarantine (56 days) in dealing with the same disease. Experience has shown that such permissive legislation is for all practical purposes useless; as local authorities, like other authorities, will interpret the word *may* in their own fashion, and very often, I am afraid, according to the manner in which it affects their personal interests

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.

Correspondents wanting reliable information relating to diseases of stock must not only give the symptoms as fully as possible, but also how the animal has been fed and otherwise treated or managed. In case of suspicion of hereditary diseases, it is necessary also to state whether or not the ancestors of the affected animal have had the disease or any predisposition to it.

In asking questions relating to manures, it is necessary to describe the nature of the soil on which the intended manures are to be applied; also the nature of the crop.

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

Discharge from Sheep's Nose.—My sheep have a thick discharge from the nose, and some have a cough. They have been penned every night near the side of a lake, but are now removed to a dry place. Would tar be the best thing to apply? Is it best daubed on the nose, or made into balls and pushed down their throat?—NOR'-WESTER, Ass'a.

[Daub some tar on your sheeps' noses, and in the feed troughs. Give sulphur in feed; one tablespoonful every day for each sheep will not be too much. Keep them in a dry, well ventilated place.]

Treatment of Spavin.—I have a well-bred, speedy mare, seven years old, showing a weakness in this way: She does not lift her near hind leg freely in backing, but steps short and nervously as if weak or lame somewhere; she does not clear the straw or other obstruction behind with that foot as she does with the other. She shows hardly any indication of this when going ahead, and none at all after getting the least exercise. She was this way last winter, and we put her in pasture, not using her all summer. On using her again this fall she appeared to be entirely free from it, but lately we notice it coming on again. She appears to strain a little in urinating.—G. Y. M., Castleton.

[According to the symptoms you describe, your mare has a spavin coming on. Examine inside of the hock joint for an enlargement. If there is no enlargement, it is an *occult* spavin, which does not enlarge externally, In either case, apply a blister composed of biniodide of mercury, 1 dracnm; cantharides, 2 drachms; lard, 2 oz. This quantity will be sufficient for four blisters. If these do not prove effective, get a veterinary to apply a firing-iron.]

When to Apply Manure.—I have a piece of sod I intend for corn and roots. Would you advise me to manure and plow under this fall, or spread on the manure and plow in the spring? The manure is well rotted; soil, sandy loam. I would like the opinion of some old farmers on this question, as many don't agree on it here.—W. E. L., Dundas, Ont.

[The sod, as a rule, should be fairly well rotted before the crop is sown, and you should know best whether or not the sod on your own soil will be sufficiently rotted if plowed in the spring. However, if there is much decayed vegetable matter in the soil, spring plowing is better than plowing in the fall, and *vice versa*. Well-rotted manure should not be applied to light soils except at, or shortly before, seeding time, for the best of the manurial constituents will leach through the soil before it can be used by the crop. If you apply the manure now whether plowed under or not, you will have considerable loss if wet weather follows, either this fall or in spring. Our advice is: (1) If you can keep your manure heap till spring without loss by leakage, do not apply the manure till just before planting the corn and sowing the root seeds. (2) If the soil has much black vegetable mould, plow it in spring; if not, plow this fall. We should like to hear from practical farmers; we shall gladly publish their views for your benefit.]

The White Grub.—The wheat crop is suffering more or less in the different parts of Western Ontario, and probably in the Eastern parts, for aught I know, by the White Grub (*Lachnosterna fusca*). Perhaps no destructive insect is better known by the farming majority than this, in its larval and perfect state; yet there may be some who do not understand its life history, and for the benefit of those I have penned these few lines, which I hope will interest and probably instruct some readers of the ADVOCATE. The grub and the May-bug or June-bug are the same insect in different forms. In the months of May and June these beetles may be seen flying around at night, and often enter the house, attracted by the light, to the great annoyance of the occupants. The beetle is about an inch long, of a dark chestnut color; its legs are quite long and slender, with sharp claws, by which it can cling readily to foliage. Each wing cover has two or three longitudinal lines. If the ends of the feelers are examined, they will present three leaf-like plates. The female enters the ground to the depth of a few inches, after pairing, where she deposits her eggs and soon dies. In about a month the eggs hatch and are known then as the Grub, although very little is known of their first year's history; but they no doubt subsist upon the small roots which they come in contact with in the ground. They are large enough the second year to make their presence felt, working near the surface upon all kinds of roots, which they cut off a short distance below the surface of the ground, and consequently the plant wilts and dies. This may often be seen in the corn fields, as well as other farm crops. The grub is full grown between the third and fourth years, and is then about the size of one's little finger. It is soft, dirty white, with a dark colored head, and is generally found with its body curved in a semi-circle, and crawls but slowly. In the third or fourth years they form a somewhat egg-shaped cell, by sticking particles of earth together by means of an adhesive fluid, within which they assume the pupa state. In May or June the perfect beetle is completed. Such is a brief history of the White Grub which is doing so much damage in Ontario.—C. R. S., Fingal, Ont.

Cement for Stables—What is the best material for cattle stable flooring, and how is same constructed, cost being a consideration?—P. A. R., St. Thomas, Ont.

[Akron cement is what is generally used for this purpose, which costs here $2.50 per barrel. The cement is made by mixing one part cement with two parts sand. If you want a substantial job, get a good stone mason to do the work. If a mason understands the work, he can make a good cement from ordinary mortar used for stone building, mixing one barrel of hard coal ashes for every two or three barrels of lime used for the mortar.]

Vinegar from Sugar Beets—I have been told that good vinegar can be made from sugar beets. Can you tell me how it is made, and if syrup can also be made from them?—OLD SUBSCRIBER, Bracebridge.

[There is no process by which the farmer can make syrup or vinegar from sugar beet.]

Bone Meal for Poultry—Can you tell me in the ADVOCATE where I can buy bone meal suitable for poultry. It is too hard to break the bones without a mill. It would pay me better, I think, to buy the ground bones than to get a mill, as I have not many fowls.—H. F. B., Campbellford.

[Write to P. R. Lamb & Co., Toronto, mentioning our name.]

The Size of a Peck Measure—What is the depth and width of a square box to hold a peck, and also half a bushel?—CONSTANT READER.

[A bushel contains 2150.4 cubic inches. If you divide this number by 2 you will get the cubic contents of half a bushel, and by dividing by 4 you will get the contents of a peck. If you mean that the width, length and depth are to be the same, all you have to do is to extract the cube root of the number of cubic inches in a peck, which will give you the three dimensions you require for a peck measure; for a half bushel, extract the cube root of the number of cubic inches in a half bushel. But as this will give you awkward figures to measure accurately, you will find that a box 8x8x8.4 will give you the size of a peck measure, and a box 10x10x10.75 inches will give you the size of a half bushel.]

Notes from Manitoba—We are having a good fall here. The threshing is all done. There has been as high as 40 bushels of wheat per acre, although the average has not been more than 22. Oats and barley have been a light crop. The farmers about here have all their fall plowing done, which will give them a chance to get their crops in earlier in the spring. We have no frozen grain this season. Hay was a fair crop, and the dry weather allowed us to sow it in good condition. The prairie fires were terrible this fall, and a great many farmers lost their hay, and some have lost all their stables and granaries with all their grain. The grain market is brisk here at present. One would wonder where all the grain comes from. Wheat is sold at 50c for No. 1; No. 2, 46c per bushel; barley, no sales; oats, 30c to 35c per bushel; pork, 3½c per lb.; beef, 3c, owing to so much hay being burnt, but good milk cows still keep at about $35 a head. There are some good high grade cattle in this country; all we want is better bulls; the cattle have a good run in this country, and are still in good condition on nothing but the prairie grass. We have had no snow yet, so it gives them a good chance to pick their living. The crop was good on the Portage plains, the crop averaging 38 bushels to the acre; oats and barley were a fair crop, they had more rain than we. Buildings are going up at Treherne, and we are in hopes of having a good town here. The railway has been extended from Holland to Glenboro, and towns are springing up all along the line, which is giving the farmers a good chance to get in their grain.—C. G. C., Treherne, Man.

Agricultural Books—Please recommend course of agriculture that will renovate worn and burnt land. Part of the farm is very stiff swamp clay, having been timbered with ash and elm, with ridges of hard pan clay. The land is quite new, but has been badly burned. 1. Would subsoiling be beneficial? 2. What are the best fertilizers to use? 3. Recommend a good work on grasses for pastures and meadows. 4. A good work on drainage. 5. Please give a short description of Johnston's Agricultural Chemistry and Harris' Talks on Manures. 6. Do you know of a subsoil plow that will lift the subsoil on top of the ground?—J. B., Kincardine.

[Any good work on agriculture will give you the desired information. Read the list of agricultural works in our advertising columns. 1. Both subsoiling and drainage would be highly beneficial. 2. Muck is the best fertilizer for burnt land, as it contains the organic matter which the fire burnt out. Any application containing vegetable matter is good, such as farmyard manure. If you can't get enough of these, mix them with any commercial fertilizer containing nitrogen, such as nitrate of soda, dried blood, or sulphate of ammonia. 3. There is no good special work on grasses recently published; most all agricultural books have more or less information on grasses. We can recommend nothing reliable and practical for your use. 4. French and Elliot are good authorities on drainage. 5. Johnston's Agricultural Chemistry contains about 700 pages, and costs $1.75. It is too scientific for the average farmer, but treats minutely on all departments of farming. Harris' "Talks on Manures" is an excellent work for farmers, being both scientific and practical, and can be comprehended by farmers of ordinary education and intelligence. 6. Subsoil plows are not intended to lift the subsoil on the surface.]

Cows Passing Blood—Ring Worms—Warts—Lice—1. Would you kindly inform me in the December number of the ADVOCATE what is the matter with my cows. They come a running in spells, and pass blood. Very few cows are in calf in our neighborhood this season. 2 Give me a remedy for ring worm. 3. Also for warts. Are they infectious? Give me a remedy for lice on pigs. My son took a sow to the boar and brought a breed of lice and infected my whole pen of hogs.—L. L. S. T., Hullet, Ont.

[1. Your cows must have eaten something which excites the womb or vagina, possibly ergot in the grass, or some peculiar weed. The same cause will prevent the cows coming in calf. 2. The simplest remedy for ring worms is gunpowder and lard mixed in the proportion of 2 drachms of the former to 1 ounce of the latter. Rub in until the scar is dried up. It is catching by contact. 3. Remove the warts with a sharp knife, and then apply chloride of antimony with a feather once or twice a week. 4. Lice can easily be destroyed by a strong solution of tobacco. Don't dress the whole hog at once, but cover one third of the animal each day for three consecutive days, and then continue applying once or twice a week, By covering the whole hog at once too much tobacco may become absorbed into the system and act as a poison.]

The Household.

Abuse of Tea.

All drugs which in small doses slightly stimulate, or tranquilize, are harmful in large doses. Paregoric is a mild sedative, but the terrible condition of the confirmed opium-eater is well known. Chloral when introduced was gratefully welcomed by physician and patient, but the excessive use of it has changed it to a curse. Even cocaine, the youngest and seemingly the most innocent of all, has already its victims.

A law that holds good of all such drugs is the following, *viz.*: that the desired effect does not continue to be derived from the quantity which was at first used, but that the system, becoming partially habituated to its use, requires that the quantity be steadily increased, while the injurious results increase in the same ratio. Hence, all use tends to abuse.

The above is true of that beverage which "cheers but not inebriates." We should expect it to be true of tea from its nature, and facts prove it to be so. The abuse of tea in a multitude of cases, and the consequent injurious effects, are vastly beyond what are generally supposed.

When tea is analyzed, it is found to contain two powerful principles, or characteristic substances: tannic acid and theine. The former is the astringent familiarly known as tannin. It is this, obtained from bark, which hardens skin into leather. Theine is a violent poison. Probably both the tannic acid and the theine concur in producing the effect which comes from excessive tea-drinking.

This is twofold. It is partly on the digestive and partly on the nervous system—in the first case giving rise to atonic dyspepsia, and in the second to irritability, palpitation of the heart, wakefulness, and brain fatigue. Says the *British Medical Journal*, "The sufferers from excessive tea-drinking may be grouped into three classes:

"(1) The large class of pure brain-workers, who speedily discover that while alcohol is pernicious to them, tea affords the stimulus they desire. They indulge in it without fear of mischief, and often to an unlimited extent. After a time, the neurotic symptoms make their appearance, and, in many cases, do much to impair temper, and to limit the capacity for sustained usefulness.

"(2) The large class of women of the better classes who begin with afternoon tea often end by using their favorite stimulant in the intervals between all meals of the day. The result is that appetite is impaired, and the prostration due to insufficient nourishment is combated with more potations.

"(3) Factory operatives, especially women who, finding it difficult to provide a cheap and appetizing mid-day meal, fly to the tea-pot, and do a large amount of physical labor on this miserable dietary."

Household Hints.

To beat the white of eggs quickly add a pinch of salt.

A badger hair brush is the best for dusting fine bits of china.

Vinegar in the rinsing water for pink or green calicoes will brighten them; soda answers the same end for both purple and blue.

Old cotton-flannel is the best cloth for wiping gilt or bronze picture frames. A small quantity of salt of tartar dissolved in water is a good solution for cleaning frames.

One may utilize old matting which is no longer fresh enough to look well by putting it under carpets. It can be cleaned perfectly by washing it on both sides with hot salt and water; hang it on a line outdoors to dry.

Eye to Eye.

Are there two people in the whole world who see exactly eye to eye? Possibly, yes; probably, no. Between the zenith of approximate unity of vision and the nadir of utter divergence of vision the degrees are infinite. "Many men of many minds." "One man's meat is another man's poison," these and similar trite apothegms are familiar forms of expressing the general conviction that men everywhere differ from each other. They differ in tastes, in convictions, in ambitions, in capabilities, in width, in expansiveness, in every conceivable respect in which their bodies differ, for, "Soul is form and doth the body make." They differ in hereditary tendencies, and in the reactions from these circumstances, in early training, pre-natal and ante-natal, and in the frequent reaction from this, in the circumstances which have to a greater or less extent moulded them, and in which they are set.

Some must think for themselves. Some are glad to be led, and find prescribed forms in religious, civil and social life indispensable for their guidance. They must have a leader and a broad and well-travelled road to move on or they feel lost. Others take a straight cut "across lots" to the goal they desire to reach, and disdain paths and guides when they see their way clear to the point aimed for.

Society, recognizing these wide differences in people, has found it necessary to prescribe certain rules and regulations within which those who enter its pale must confine themselves. These rules, termed conventionalities, are to a degree arbitrary and often unreasonable, but he who would be admitted and retained within the charmed circle of polished society must submit to them without reserve or protest. People generally drift about seeking their affinities, and when these are found, attach themselves to their kind, and thus an infinite number and variety and innumerable grades of social circles are formed. Within these circles life is comparatively easy when each member does what is allowed and refrains from doing what is disallowed. The trouble comes in when a change of sentiment or conviction or volition takes place in any member of the circle, and following this change the conventionalities are infringed upon or unsatisfied, or when some new member is admitted to the circle who is found not to be in harmony with it. As these conditions are continually in a state of change, there is unrest and fermentation.

The thoughtful and conscientious person who endeavors to find out what is right and just and proper for him to do and to do it, is always finding himself at odds with some of his friends and neighbors. If he feels that it is wrong for him to take a walk on Sunday, to dance, to play cards, to frequent fashionable places of amusement, he is inclined to think it must be wrong for everybody else, and he may commit as much sin and more in judging others harshly as they do in their indulgences, which to them moy seem innocent. We are commanded to "judge not," How to order one's conduct so as to secure the approbation of one's own conscience, which is a man's first duty to himself, and grant the same privilege to one's associates so that there shall be no unfriendly feeling, is often a very difficult thing to do. Bnt "charity covereth a multitude of sins." Only by the exercise of charity can the bigoted, the liberal, the conscientious, the broad-minded and the narrow-minded live together in harmony.

We find as wide diversities in members of the same family, as we do in members of the same social circle. In the latter there is some choice as to frequency and closeness of association. In the family there is much less choice. We must live day by day with those who see things from new points we cannot command, and who cannot command the new points from which we see, yet who may as earnestly desire to live a right life as we do. Unless each member of a family concedes to every other member individual rights and privileges and confines himself within his own legitimate jurisdiction, there can but be constant frictions and clashings and consequent unhappiness. The wide-minded man may look with pity on his narrow-minded consort or child, as the case may be but he must respect the limitations of her mind, and leave her to answer for herself to God. She is incapable of comprehending the width of his view and the ease and unconcern with which he does a thousand things to her forbidden or impossible, must yet permit him to lead his own life unjudged by her, and to answer for himself to God.

Upon the dinner-table the house mother sets a variety of wholesome dishes, among which each one who sits at the table shall find what will meet his or her particular need. She does not require any one of the circle to eat what will be sure to disagree with him. She leaves a large discretionary power with all capable of choosing as to what and how much they shall eat. Just such a discretionary power should we each one concede to our fellows in daily life, giving them the same right to choose for themselves that we claim to choose for ourselves, and extending to them the same charity we wish them to extend to us.

Vienna Girls.

The system carried out in Vienna for educating girls is entirely worthy of note, says the Buffalo *Courier*. They are kept at their studies until they are at fifteen years of age. Then they go through a course of teaching in the pantry and the kitchen, under some member of the family, sometimes under trained cooks, for a year or two years. Thus they learn to do everything themselves, and to know the value of things long before they commence housekeeping on their own account; and though they may never be required to cook a dinner, they become independent of cooks and servants. The Austrian women are most affectionate wives and mothers. They are as accomplished as an English governess, are as witty in society as a Parisian, and are among the most beautiful women in Europe,

Old-fashioned button-moulds, with the dress material put on over them by hand, are being used. Black satin buttons are made in this way.

Family Circle.

A TERRIBLE CHRISTMAS-EVE.

BY THE AUTHOR OF "NO DEFENCE," HALF A TRUTH," ETC.

We were as cross as we well could be—that is three of us were; and I think we had some reason. To be detained for two hours at a stupid junction, on Christmas eve of all days in the year, is provoking enough without the added circumstances of the said junction being an out-of-the-way place in ——shire (which is almost as far north as it can be not to be over the border), and a keen north-east wind blowing through the chinks of the blindless waiting-room window, and driving the snow against the panes in clouds. Certainly, there was a jolly fire in the grate, and the porter (I believe there was only one) tossed on a liberal supply of coals and a splendid log to boot; and as we all had fur cloaks, we had not much reason to complain of the cold; still, it was frightfully annoying to be moped up here, on Christmas-eve, too! with nothing to do but wait, wait for the southern train, which might come goodness knows when, if the snow kept on at this rate. So we three sisters grumbled vigorously, while we warmed our hands over the blaze, and wondered anybody could put up with existence in such an odious county as ——shire.

We had been staying for some time past with friends over the border; but the people at home wanted us to return for Christmas, as grandmamma was to spend it with us, and she was anxious to see us all around her, for the last time, it might be; and here we were stuck for at least two hours, probably more, and a hundred miles to travel before we reached our home in ——shire.

I have intimated that there was a fourth person present who did not grumble, and her quiet resignation to the inevitable ought to have shamed us into silence; especially as she had already travelled a greater distance than we had, and was going to London. She was a slight, delicate-looking woman, somewhere between thirty and forty, I should judge, with a face that one would call charming, and never think whether it was pretty or not. I had studied her covertly a good deal when we got into her carriage at Prestwick, and it struck me that she could be very fascinating if she chose; she had a remarkably firm mouth and chin, too; and when she spoke and smiled her face lighted up wonderfully; for in repose there was something in its expression that made me feel sure she had suffered very much.

We had entered into conversation on the journey, and then she told us she had been nursing a friend in Dundee, and was going home now to London. I remarked upon the severity of the weather in these parts, and she answered, "Yes, it was very severe—she did not like the snow." She said this with a curious shudder, which made me think that perhaps she had lost some one in the snow, and so I spoke of another subject.

She sat now in the chimney-corner, with her back to the window—I don't know if she did this on purpose—and her face in the shadow, and she was so uncomplaining and quiet, that at last I grew ashamed of growling, and exclaimed:

"I say, it's too bad; I'm sure this lady thinks us the most ill-tempered young women in the world. Don't you?" turning to her.

"Not at all," she said, with her sweet smile and soft voice. "You are young, and I don't suppose have suffered much. One needs to know real suffering to be philosophical over trifles."

"But such a nasty hole as this!" said my youngest sister. "I'm sure this is the horridest county in England."

"I have no cause to love it," said our travelling companion.

"Why," said I, in surprise, "have you ever lived north?"

"For nearly nine months—not very far from here—there was no railway then."

Again that shudder, and half backward glance over her shoulder.

"A ghost?" whispered Bessie, the youngest, to me; but the lady overheard, and smiled.

"A good deal worse than a ghost," she said. "It was the snow I was looking at."

Bessie coloured.

"I beg your pardon," she said, "I didn't mean you to hear."

"It is of no consequence, my dear; but a very terrible experience happened to me on Christmas-eve in this county, and it was just such weather as this, so it naturally comes back to me very vividly to-night."

Three pairs of eager, wistful eyes were turned to the sweet, grave face in the chimney-corner; involuntarily we drew our chairs nearer the fire, and glanced out at the gathering darkness and driving snow.

"You want to hear about it?" said the lady, answering our looks.

We did not like to *ask* for the story.

"Not if you would rather not tell us," said I.

"No," she said, "I can talk of it now; for some years I could not. It may beguile the time of waiting; and if you don't find my story very interesting, it is, at any rate, true. Every act—every look—every word is stamped upon my memory as the type is printed off on the paper."

After a moment's pause, she commenced:

I may as well begin by telling you my name—it is Carlton. My husband is Dr. Carlton. It is possible your parents might remember the name, for the affair was in the papers of the day; but of course you would know nothing about it. My husband has a good practice in London now; but seventeen years ago he was a struggling man, as most young doctors are. We were Surrey people, and I had never been north in our life, so I confess I was not best pleased when my husband came home one night, after we had been married about three months, and told me he was in treaty to buy a practice at East Malden, in this county. We were told it was a very wild and semi-barbarous place, and that a south-countryman would find himself much opposed by a dead wall of prejudice; but warnings were all in vain; my husband was determined to try his luck, and the practice was bought, and off we went to our northern home.

East Malden is about seven miles from here, and at that time the nearest point by rail was to Snawton, twelve miles distant. West Malden, a small market-town, is about three miles from the village, but might have been a dozen for all the intercourse there was between the two places in those days, I daresay there isn't much now. My husband's practice extended over a wide district, embracing several scattered hamlets; but East Malden, a tolerably large village, was its centre. Our new home was in the very wildest part of the ——shire fells, and as the house stood quite by itself, three-quarters of a mile from East Malden, and three times as far from any other habitation, you may imagine how lonely it was.

We had taken with us a little servant-girl of about fourteen, who was devoted to us, but I often feared our solitary home might prove too much for her devotion. Brave, faithful Nellie! She is with us still.

Our lines had not fallen upon pleasant places. To begin with, the people were rough, deplorably ignorant, determinedly set against the new doctor—greatly on account of his coming from the south, but principally because he was, as they considered, new-fangled, and, as some said, used evil arts.

His predecessors had not been very much more enlightened than the people themselves: hence a surgeon who ran counter to almost every accepted tradition of the healing art, as understood in East Malden, was certain to meet with pronounced opposition.

The people could not go to another doctor, for there was none nearer than West Malden, and he, besides, had enough to do to attend to his own practice; but they regarded my husband with suspicion and hatred, and often flouted his directions, and then, when mischief ensued, blamed him.

Such miserable ignorance may surprise you, but it is to be found in other parts of England than this remote county—even in this day.

Things grew worse instead of mending as time passed on, though my husband strove bravely to conquer the prejudice against him; but nothing is so invincible as ignorance. If a sick man recovered under my husband's treatment, it was witchcraft; if the man died, it was the doctor's new-fangled ways that killed him. I ceased to go into the village—jeered at, and heard many uncomplimentary remarks at first which I did not understand; but I was always quick at dialects, and I soon learned to understand what was said by the people when they came for my husband, to see him or fetch him. I almost always, however, pretended only to make out that they wanted Dr. Carlton, for they would frequently add some abuse of him, and I deemed it more politic not to appear as if I comprehended what was said, for then I must have taken notice of it, and that would make matters worse. How I blessed Heaven afterwards for this prudence!

I grew more and more nervous as the winter drew near—the winter which begins so early in these parts; and when my husband was away, especially if he was detained late, I used to feel terribly anxious, fearing he had been attacked, or some trap had been laid for him. If I expressed any such fears to him, he laughed, and rallied me on my "fancies," as he called them, not unkindly; he loved me too truly to do that; but he wanted to reassure me, and he really was perfectly fearless. The people, he said, were a rough, and, on the whole, rather a bad lot; but not *quite* as bad as I imagined. I tried to keep my thoughts to myself, not to worry him; for of course he had enough to bear, but all the same, I lived in daily, hourly dread.

The winter of that year—(Mrs. Carlton went on, glancing back again towards the driving snow)—set in like this winter—bitterly cold, with heavy snowfalls even early in October—and I was day after day a prisoner in the house, with only my faithful Nellie as a companion. My husband was often absent for hours at a time; but though, when we met, he tried to be cheerful, and to make the best of things, I could read between the lines, and I knew the prejudice against him was as strong as ever.

Near the end of November, my husband was called to attend the child of a labourer named Smith; the child was suffering from typhus, a very bad case; but if my husband's directions had been observed, it would have lived, he said. The parents, however, insisted they knew best, and chose to supplement or omit orders at their own discretion. The end of it was that poor little Polly Smith died in three weeks from the first seizure. My husband was so angry with the parents that he told them openly (not very prudently) they had killed their child; but they retorted that *he* had killed the child with his "new-fangled" ways; and the neighbors made common cause with them. The funeral of the girl was made the occasion of a demonstration against "t' Lunnon doctor," and the animosity became quite menacing. The clergyman warned my husband against going into the village, and I implored him to keep away. He promised me he would, saying that, in time, the matter would blow over. But I knew better; these ——shire people don't easily forget, and never forgive.

Under such circumstances, the prospects of Christmas were gloomy enough. To add to our trials, the weather was, to our southern temperaments, mine especially, Siberian. And the eternal snow seemed to daze the senses.

So Christmas-eve came just a week after Polly Smith's funeral. The snow on the fells was as hard as iron. None had fallen for four or five days, but there was a saffron tint in the leaden sky that promised more to-day.

"Another snowstorm!" I said, with a sigh, as we sat at breakfast. "Oh, dear!"

How little I knew I should bless the snow for falling!

About three in the afternoon a farming-man rode up from a farm some five miles off to fetch my husband; the master was "taken mighty bad." There could be no trap here. Farmer Nash was an honest fellow, and my husband knew the messenger well. There was nothing for it but to go; though my heart sank like lead as I bade my husband good-bye. I induced him to take a life-preserver with him (there were no firearms more than a fowling-piece in the house), and entreated him to keep a good look-out on the road home. He saddled his horse, and rode off with the messenger, and I was left alone to watch with deadly anxiety for his return.

He did not come back until past nine o'clock, and then on foot. The farmer had been dangerously ill, but was now on a fair way of recovery. The horse had gone lame, and my husband was obliged to leave the beast in charge of a smith about half-a-mile from the farm until to-morrow—Christmas-day. But I was too glad to have my husband home again safe to trouble much about the horse. Again, how little I could foresee!

While we sat at supper it began to snow, but not heavily; but I did not mind that so much now. My husband was very tired with the anxiety of the case he had attended, the cold, and the walk over the moors; he said too, laughing, that the farm-people had given him some elderberry wine to warm him, and it had made him sleepy. So he went up to bed directly after supper, but I remained up to finish some work I was doing.

I should explain that our bedroom was in the rear of the house, not immediately above the sitting-room; and that, besides the front-door, there was a surgery-door at the side.

I had not heard any sound, when suddenly—this was a little past ten—Nellie came into the parlour with a somewhat scared face, the sight of which made my heart leap into my throat.

"What's the matter, Nellie?" I exclaimed.

"Please, m'm," said she, "there's two men in the surgery—Tom Smith and another—asking for the master, as I take it. They said, 'Doctor t'hom?'"

Just for a moment I felt as if turned to stone. Then I said, quite quietly:

"And what did you answer them, Nellie?"

"I just nodded, and came straight to you, m'm. They wouldn't understand me."

"No," I said, rising. "It was a pity you let them in, Nellie, without coming to me first. But don't be frightened; but look here, my dear—*your master's out!* Do you understand?"

The girl looked at me, and went as white as a sheet; but she was a sharp London girl, and she understood.

"Now," I added, "go to the kitchen; I may want you by-and by. You have nothing to fear. I'll speak to the men myself. Hush!"

Nellie went out without another word, but she gave me a look I shall never forget. It was so brave and loyal. I felt the girl comprehended at least something of the truth, and was ready to stand by me, happen what might.

I cannot tell what made me so calm, knowing what I knew the instant Nellie told me the men were in the surgery; but I *was* as calm and self-possessed as if they had really come on what was, I suppose, their ostensible errand—to fetch the doctor.

I had the whole position against me clearly. The men should believe my husband was still out. The falling snow—ah! how I blessed Heaven for the snow *now!*—had long ago obliterated his footsteps. The horse was not in the stable. I could, perhaps, persuade them to go away—even induce them to watch for him on the road from Farmer Nash's. They would not, I reflected, kill *me*, unless it was absolutely necessary; but I had no thought or fear for myself at all.

I lighted a candle—my hand was as steady as my husband's own—and went out to the surgery.

There stood Tom Smith, a huge, bulky, ——shire man, who would make two of my husband—a man with a coarse, heavy face, and a black mat of hair. With him was a smaller man, whom I recognized as an idle loafer, who sometimes did a turn of work, but oftener lounged about the village ale-house. This I knew was his character, and he looked it.

They were pleasant-looking men for a woman to find herself alone with in a solitary house among the fells!

"Did you come," I asked at once, courteously—neither of the men moved his cap, or saluted me in any way—"for Dr. Carlton?"

"Yes," returned Tom Smith. "This chap's sister's took mighty ill, and he's afraid to come alone for doctor, so I came along with him. Doctor must come at once."

Of course this was all false, but I must pretend to believe it. Also, I resolved to affect a very imperfect comprehension of what was said—it was in the broadest ——shire; this might induce the men to speak to each other more freely in my hearing.

"I am so sorry!" I said, looking concerned (they could understand me fast enough). "I can't make out all you say, only that some one is ill. I will send the doctor the instant he comes home. He is out now."

The men glanced at each other, and Smith shook his head.

"That won't do," he said; "we want t'doctor *now!*"

"But he is out," I repeated. "He was called to see Farmer Nash—five miles off, as you know—and he hasn't returned yet. I am sitting up for him."

What a mercy, I thought, that the supper things are removed and put away!

Tom eyed me suspiciously; my mien and manner deceived him. He did not think I suspected him, but he doubted me all the same."

"Look here," he said, with a touch of menace in his tone, "doctor don't want to go out because it's Christmas-eve, or maybe he's afeared; but he'll have to come all the same."

"Afraid?" I repeated, as if catching something of what was said. "I assure you you're wrong; if you don't believe me, go to the stable and see for yourself that my husband is away."

Tom winked at his companion, who opened the surgery-door and went out. Presently he came back.

"It's right enough," he said, "the horse isn't there."

I breathed a little more freely. But what would their next move be? If they would only go to "waylay" my husband on the road!

"We'll wait for doctor," announced Tom.

"But I assure you," I said, "I will send him as soon as he comes home."

"Best make sure of him," said Tom, rudely; "we're going to wait for him—eh, Joe?"

Joe nodded and grinned.

"Very well," said I, quietly: "but I am afraid you may have some time to wait."

"That don't matter; what we want doctor for'll hold a bit—eh, Joe?"

Again Joe nodded, and both men, without more ado, pushed past me into the parlour: and as I followed I saw them draw up to the fire my husband's arm-chair and mine, and seat themselves, spreading their immense hands before the blaze. But insolent as this conduct was, I preferred it to their going into the kitchen, which was underneath my husband's bed-room. If, even here, he should be aroused by their gruff voices and come down! I was sick with terror, and yet I had never felt more perfectly self-possessed.

I sat down and took up my work again, as if such an invasion of my parlour was nothing out of the usual order of things. Mentally I was revolving how I could obtain assistance.

It was useless—even if I had anyone to send—to seek help at East Malden; West Malden was nearly three miles across the fells, and I could not, of course, go myself; the men would at once suspect me if I pretended to go to bed, leaving them in possession; and everything depended on my "playing" them.

Nellie! The thought—the hope—almost took my breath! Nellie had been sometimes to West Malden; but could she find the way thither over snow-covered fells—and at night? Would she undertake so perilous a journey? Could I risk the child's life to save my husband's?

Meanwhile Tom Smith and his companion had selected two of my husband's pipes, and, filling them with tobacco from a box on the mantelpiece, lighted them and began to smoke.

"I suppose," said Smith to me presently, "doctor's got a latch-key—eh?"

"A latch-key?" I answered. "Oh, no. Why?" I knew very well.

"Oh! nothing," he replied, "Say, missis, hast got any beer in the t'house?"

I thanked heaven that I had only a small quantity. What might not these wretches do if they got mad drunk?

"I have some," I said, rising, "but not much."

I rose to go to the larder where the barrel was kept. Joe, at a nudge from Smith, rose to follow me; he evidently wished to satisfy himself as to the quantity of beer we had in store. How I trembled as the man's heavy step sounded through the passage and the kitchen! If my husband should wake! but there was not a sound above. Nellie, as we crossed the kitchen, pretended to be very busy over mixing the pudding for the next day. I saw Joe glance at her with a grin. I knew the diabolical thought that was passing through his mind—there would be one short at the Christmas table to-morrow! He took the beer-cask and emptied all it contained—not much—into a large jug, with which he returned to the parlour, leaving the door a little open. Now was my opportunity: but I must be cautious.

"Nellie," I said, aloud, "you can leave that now and go to bed."

Then, as the broad form of Joe disappeared, I added, under breath:

"Nellie, would you go to West Malden for help? *Could* you go such a night as this?"

Heaven had put a heroine's soul into that girl of fifteen. She looked up at me straight, and whispered back:

"I'll find my way, m'm."

I just stooped forward and kissed her forehead. I couldn't have said a word if I had tried. Nellie's face flushed up with a strange delight; she turned away, and seemed to be putting things away, while I drew out a letter from my pocket, and on a blank sheet wrote:

"FOR Heaven's sake send armed help. There are two men in the house waiting to murder my husband. He is asleep in the house, unarmed.

"From the wife of DR CARLTON."

"Give this," I said, "to the sergeant at the police-station,"

Nellie took the paper and thrust it into her bosom.

"All right," she whispered. "*I* won't be seen."

"*He'll* help me!" she said, "and keep you and the dear master safe. Good night, missis," she added, aloud.

I kissed her once more. I might never see the brave-hearted girl again; and yet her simple faith had deeply impressed me, and given me hope, despite the agony of suspense and dread.

Nellie's bedroom was at the end of the passage. I knew that she meant to get out of her window. I looked through the kitchen-window; it was a dark night, the snow falling fast, but not heavily. How cold it was!—even here, where there was a fire; or was it that my blood was chilled to ice?

I dare not leave the two ruffians long; they might take it into their heads to suspect me, or make a row, and so arouse my husband,

I returned to the parlour and sat down again. The men were still smoking—the beer they had finished—and talking in muttered tones. They glanced at me, but continued talking together as if I had not been there.

"Think she's any notion—eh?" asked Joe, with another covert look at me.

Smith chuckled.

"No! D'y- think she could take it so cool if she had? She knows we mean to make doctor come, when he don't want to—that's it. Of course he wouldn't go along with we if he could help it' after murdering my baby and my threatening him.

"But look here," said Joe, "what's the use of leaving witness s to tell on us?"

Tom did not answer for a moment.

What a moment for me! But I took a fresh thread from the cotton, and began to thread my needle.

Then Tom shaking the ashes from his pipe, said, slowly:

"No Joe, not if we can help it; it's doctor we've got the quarrel with. We don't want more blood than his."

Joe nodded sul'enly, and muttered something about "no fun in hanging just for a couple of women," but Tom made no rejoinder, only looking at his watch.

As he turned back his rough coat to do this I saw the butt-end of a pistol sticking out of an inner pocket. I had feared the fellow was armed; I knew it now.

The clock in the kitchen struck twelve. What a hideous Christmas-eve was this! Here I sat with two murderers, knowing not what a minute might bring forth, my husband asleep above; and help, if it could even be reached, hours away. Yet I must be calm when I was enduring such mental tortures as cannot be even faintly pictured, save by those who have gone through a similar experience. Every sound made my heart almost cease beating—the chirp of a cricket in the kitchen, the fall of a coal in the grate, the soft thud of the snow against the window panes. I listened—listened till every nerve seemed endowed with the sense of hearing—for a footfall above, the sound of an opening door.

The minutes dragged themselves out into years of agony, and yet it must be hours before help came, even if it came too late; even if brave Nellie did not lose her way, or perish in her noble task. She could not reach West Malden under an hour and a half, and the constables would be at leat as long in returning, if the snowstorm by th t time had not increased so much as to prevent them coming at all. Then, or even if they were too long delayed, might not the murderers begin to think that their victim was in the house, and insist upon searching for him? I tried to put such horrible fears from me—it might unnerve me—but how *could* I put them away? I rose and went to the window, in the restlessness of agony; it was snowing still, but, Heaven be praised! not thickly. Where was Nellie? Was she near her goal or wandering hopelessly about, or lying prone on the pitiless fell-side?

"I think it is very likely," I said, "that Dr. Carlton has been kept at Farmer Nash's, as it is so bad a night."

"Oh!—aye, he'll come home," responded Tom Smith: "his horse 'd know the way, if he didn't—he'd come home Christmas-eve!"

He chuckled as he said this, and nodded at Joe.

I sat down again baffled, leaning my head on my hand as if I were sleepy. Sleepy! I felt as if slumber could never visit me again! and he above slept still - thank Heaven, oh, thank Heaven!

By-and-by the men ordered me to bring them supper. I was glad they did not go themselves to fetch it; they would have certainly made a noise over it. I brought them in pretty well all the cooked food the house contained in the way of eatables. Eating would keep them occupied for a time at any rate, though not for long. How can men look at food who have murder in their hearts?

They went at the viands with a will, eating coarsely and greedily, and consuming ane normous quantity, for we had laid in provisions for several days, being Christmas-time, and a good deal of it was cooked, or of a kind that did not require cooking.

The men were rather merry over their meal, and every second I dreaded a shout of laughter or the thump of a huge fist on the table; but they chuckled rather than laughed out; and once, when Joe hit the table rather sharply to emphasize a coarse joke he had uttered, and I felt as all was over now, Smith stopped him with a quick:

"Hut! mate, t'doctor may have a latch key after all, and this" tapping his coat significaently—"we want to hear him!"

Was it not *some* relief to know that they would be quiet, for the better carrying out of their fell purpose?

"Two o'clock," announced Tom Smith, presently. They were sitting by the fire again, for which I, by, their orders, had lately fetc'ed coals. "We're goin' to wait here for doctor, missis, if be don't come home till broad day, in time for his Christmas dinner, and there ain't much of it left."

They both laughed at this sally. Till morning! If help did not come then, what would the end be? for the morning light would surely wake my husband! Almost dead silence fell at last—nothing but the soft thud of the snow against the windo v and the occasional dropping of a coal in the grate.

Great Heaven! that awful night! What would the dawning of Christmas-day be for me?

Three o'clock. I looked out again; it was snowing faster—thicker; it was not quite twelve when Nellie went. Perhaps she had never reached West Malden; and if she had reached it, and the constables came back with her, would they approach the house cautiously? If these men saw or heard anyone coming they would, perhaps, in their rage kill me. Well, but if they did—still my husband would be saved—only would he value his life at such a cost?

Was there no hope? Half-past three, and no help yet! The men had not moved or spoken for nearly an hour; they sat watching and waiting like bull-dogs.

I rose, and was moving to the window again, from which the front-door was not visible, when I heard a sound that seemed to turn my heart in that second to molten wax. It was too light a sound for any sense of hearing less acute than mine was to-night—just the light touch of a foot above.

My husband was awake! The long agony was all in vain! One moment more——

A loud, heavy knock at the outer door rang through the house!

The two men leaped to their feet—Smith with his hand on his pistol!

Great Heaven! even *now* it might be too late! I rushed towards the open door, but Smith, with a fearful exertion, caught me, and, hurling me back, strode to the outer door. I heard him open it—then there was a fearful yell—a heavy sound—the crash of a falling body—and then what seemed to me a roar of voices.

I saw faces—faces; someone was at my feet—Nellie, I knew afterwards; and next I was clapsed close in strong, loving arms; and that was all I knew for many hours to come.

I was ill for months afterwards, and perhaps my nerves will never be what they were; the tension of that Christmas-eve almost killed me. My husband said the long illness saved my reason.

They nursed me back to life, Nellie and my husband; and now you see, I can even talk about that night. But for many years the sight of snow would drive me into a fit of nervous trembling.

Tom Smith was fatally injured by the blow the constable's staff gave him. Joe was sentenced to fifteen years' penal servitude.

This is the first time I have been north since that night, and I am glad to leave it even now. I suppose I shall never care to look at the snow as long as I live.

That is rather a woful story to beguile the time of waiting, isn't it? But it has made the time pass quckly, too, I think, for here comes the London train.

Fashion Notes.

Feather bands both plain and shaded are a favorite garniture on new wraps.

All sorts of novel bows are used to form the high bonnet trimmings of this season.

Rough camel's-hair fabrics of every description are popular for tailor-made gowns.

Applique galloons trim many handsome cloth and wool dresses.

Very small pokes are worn by young women, married or single.

Jackets grow longer.

Short basques are going out of favor.

Beaded velvet bonnets are worn with dressy frocks.

Very few dresses are made of one fabric.

Fur boas are from two to three yards long, and some have tassels and others balls on the end.

Furs, especially Astrakhan and black martin, will be used to trim cloth suits for midwinter wear.

Alpaca is now brought out in new colorings and improved texture that drapes better than the old.

Hoods appear to be added to every sort of wearing apparel upon which they can possibly be adjusted. Some are merely ornamental, others intended to be useful as well. Rounded, pointed, flat-gathered, and even heart shape, they are seen upon the backs of cloth New-markets, pelerines, visites, ulsters, opera cloaks, waterproofs, and even upon some Paris-made tea gowns.

Colored and black velvet bands are again worn round the throat with evening dresses.

Inclosed please find $2. I consider the FARMER'S ADVOCATE the best paper out.—JOHN FLEMING Bay View, P.E.I.

Minnie May's Department.

MY DEAR NIECES.—How to amuse the children during the evenings, especially those of the long winter, is a question of no slight importance to many mothers who have children growing to manhood and womanhood.

The children of some families are allowed to spend their time between school hours and bed-time in the streets, and that is when and where so many acquire bad and pernicious habits.

Dear reader, can you guess the reason of this?—the *home* is wanting in attractions for them. The parents themselves may be good people, trying to lead consistent lives, but thoughtlessly and carelessly leave the children to run as they please, instead of providing such home amusements as would make them love it.

We well know that many young men have been driven to find their pleasure elsewhere, because nothing was done to make their homes attractive to them; and we also realize how much of the cheerfulness and life of the house depends upon the conduct of the sisters in it. So let me take this opportunity of reminding you, my dear nieces, that you are, in a great measure, responsible for the happiness of your brothers, some at least of whom may have a decided objection to spending a *dull*, quiet evening at home.

This desirable end cannot be bruoght about without any self-sacrifice on the part of the girls. We do not want the brothers to think by this that they were born to be entertained, for they must also do their share to make it equally pleasant for the girls. Our Lord tells us that if we would follow Him we must deny ourselves; therefore, to practice music or play games, to please a brother or a sister, when we would much rather do something else, is just as true self-denial as it is to bear suffering and persecution.

Music is one of the most pleasing of home entertainments, but even that grows tiresome to many. Reading is also pleasant and instructive. I have spent many a happy evening at home that way. While the boys would read aloud, the girls are occupied with sewing, or one of the many kinds of fancy work, for needlework helps one to remember wonderfully.

If at times the minds of the family require some more stirring amusement, there are many games suitable for all ages, from the parents to the younger members of the family circle, who may be allowed an hour or two of fun before bed-time, and we all know the fun is much better appreciated and enjoyed when "mother and father will play too," and not consider it beneath their dignity to join in the children's sports.

These games are endless in number and too lengthy in description to name many of them in detail, but I will try and give a general idea of a few.

There is a *drawing game* which causes much merriment. Sitting around the table, each person is supplied with a pencil and piece of paper. Then he or she will think of some subject—say an incident in English history, or a line from a well-known poem—and draw an illustration, not mentioning the subject; then pass the paper round the table, and each person in turn writes beneath what she thinks it represents, beginning at the bottom and folding the paper so that no one can tell what the person before has guessed. When all these have returned to their original owners, each opening her paper, states what the subject really was, then reads out all the guesses. Sometimes they are very amusing; and the least idea a person has about drawing the better is the game, for a good artist is apt to make the subject too evident.

"Verbarum" is another good game. Each player must have a half-sheet of foolscap, folded lengthwise into three, and a lead pencil. Now decide upon a word containing most of the vowels, and an *m*, a *d*, or a *t*; avoid if possible a repetition of letters. Suppose we choose "fortunately;" out of this word you must make as many others as you can produce in the time allowed, confining yourselves strictly to the letters of which "fortunately" is formed. Three minutes will be given for each set of words. Commence with the first letter, each letter in turn being the beginning of a new set. There must be no proper nouns nor words of foreign languages, and perfect silence must be observed. A conductor may be chosen to time each set, calling out the words "start" and "stop." At the end of the first three minutes the player sitting next the conductor reads out her words. "Fort." All who have it on their papers call out "yes." If more than two have it, all cross it out, but count nothing. She passes on to the next word, "front." If only two people have this they each count one, putting the figure against the word. If one person alone has a word she counts two for one syllable. The list of words being called out by each player, they proceed to the next set, commencing with *o*. When again at the end of three minutes the "stop" is given, the same form is gone through, counting where you can. The words with *o* being finished, you start again with *r*, and so on with all the letters, except where letters are repeated a second time; these are, of course, omitted.

Having completed the word, you reckon up your numbers, and the one having the highest is the winner of the game.

"Quotations" is very good, but one in which only the older members of the family could join. Each person selects say three or more quotations, committing them to memory before hand. Then when each quotation is repeated, some one else must try and name the author. The one who first guesses correctly obtains a mark, or receives a favor, say a flower or a bit of bright ribbon to tie in the button-hole. A pleasant evening with friends and neighbors can be passed in this way, calling in a "quotation party," apprising each one before hand of the idea, so they may come with their quotations prepared.

In one's own family, it is a good plan to interest the children, in fact all the members of the family, in the history of the common articles of daily use, as food, dress, etc. For instance, once a week let each member tell all they can find out about some particular article of food, say pepper, sago, prunes, coffee or tea, or of clothing, as silk, shawls, alpaca, etc. Most families, if questioned, would exhibit a lamentable ignorance concerning the source whence these very common things are derived, but studied in this manner they form a pleasant and really instructive pastime.

"The stool of repentance" may be played by any number. One of the players sits on a stool in the centre of the room, while another goes round and collects remarks (which must always be of the kindest nature, consistent with truth) relative to the individual occupying this position. These remarks are communicated in whispers and carefully written down in turn by the collector. They are then read off aloud but not in the order they were received, and the player on the stool has to guess the authorship of each. When she succeeds in fitting a remark to its author she vacates her stool, which is taken by the one whose saying was guessed.

"What is my thought like?" is also good. All sit in a line except one, who stands out facing the others. This last writes down the name of a person or thing thought about, and then, without revealing what she has written, turns to any one of the players and demands, "What is my thought like?" An answer must be given before twenty is counted, and then the original thought is read out, and the last speaker must prove the likeness between the two things; Sometimes there is a great dissimilarity and the player is at a loss to find the least resemblance between the "thought" and what she had ignorantly declared it to be like.

Dumb crambo is played by dividing the players into two sets. One set goes out of the room, whilst the players who remain in choose two words that will rhyme. The others are called in, one word is told, and they have to guess the second and represent it in dumb show. If wrong they are clapped out, and must try again. If correct, the sides change place.

Although there are numbers of games not yet named, still I must go no further, as space will not permit, but trust these few will be a help, at least, to some, in passing pleasant evenings at home.

In your desire, my dear girls, to make your homes attractive, do not neglect to let this coming Christmas inspire your hearts to do something for the sake of Him whose birth we are about to celebrate. There are many sad and afflicted ones for us to cheer, hungry ones to feed, and shivering ones to clothe, and Christ Himself it was who said, "Inasmuch as ye have done it unto of the least of these, my brethren, ye have done it unto me." Therefore, let us each, even with our mite, do some little act of kindness to those less fortunate than ourselves. It may be that thus, or even in the loving Christmas remembrances of friends far away, we may find something to animate our best and highest desires, helping us to be more constant in the practice of all that is good and true, which is but the reflection of His power and love within us.

May all my nieces and friend enjoy the best possible cheer Christmas has to bestow on every board, whether it is in cottage or in mansion.

Sincerely hoping to continue the acquaintance of all with whom I have had such pleasant intercourse for months and years now passed away, I wish you each and all a truly "Merry and Happy Christmas." MINNIE MAY.

Remedy for Deafness.

I was very hard of hearing for a long time. I tried nearly everything. At last I heard of this: Take two-thirds British oil and one-third laudanum; put together and shake before using. Put two drops twice a day in the ear; if it makes you dizzy use the two drops only once a day. I can now hear almost as well as ever.

Recipes.

TAPIOCA PUDDING.—Four tablespoonfuls of tapioca soaked in water two hours. Heat one quart of milk, and add to it the tapioca, the yolks of three eggs well beaten, sugar and salt to taste. Stir until it becomes thickened, then turn into a pudding dish, and frost with the whites of the eggs beaten with sugar. Brown slightly in the oven.

FRENCH CABBAGE.—Chop cold boiled white cabbage and let it drain till perfectly dry; stir in some melted butter to taste; pepper, salt, and four teaspoonfuls of cream; after it is heated through add two well-beaten eggs; then turn the mixture into a buttered frying-pan, stirring until it is very hot and becomes a delicate brown on the other side. Place a hot dish over the pan, which must be reversed when turned out to be served.

PUMPKIN SOUP.—Remove the seeds and pare off the rind from two pounds of pumpkin. Cut the pumpkin into small pieces and simmer slowly in half a pint of water for an hour and a half. Then rub it through a sieve and put it on the fire with a pint and a half of boiling milk, a piece of butter the size of an egg, some salt and pepper, a very little sugar and three slices of stale bread cut into small pieces. Stir a little and serve as soon as it boils.

MINCE MEAT.—Two quarts of chopped apples, one quart of chopped beef, two ounces of minced suet or the same amount of butter, one teaspoonful of salt, two of cinnamon, one of nutmeg, and a little clove—not more than half a teaspoonful—one cup of boiled cider, one cup of clear stock in which the beef was boiled, one pound of raisins seeded and cut in halves, and three cups of nicely flavored brown sugar. Stir all thoroughly together in an earthen or granitized pan, and let the mixture come to a simmer at the back of the stove while the pastry is being made.

PLUM PUDDING.—Here is a recipe for the real old English plum pudding and everything appertaining thereto. There are a few general rules for all boiled puddings that any one attempting to make a plum pudding should understand. If boiled in a mold it should never be more than two-thirds filled; the cover must fit so tightly that no water can enter. If a bag or cloth is used, it must be thoroughly soaked in hot water, then wrung out and the inside dredged with flour. If this is done, and the bag plunged in cold water for a second after it is removed from the fire, it will turn out of the cloth without sticking. Plum pudding wants plenty of water to swim about in; therefore the vessel must be large and contain plenty of boiling water when it is put in. The water must boil the whole time, otherwise it will soak into the cloth and make the pudding heavy, and as the water boils away it must be replenished from another kettle of boiling water. If cold water is used it will be certain to make it heavy. Armed with this knowledge you may proceed as follows:—Chop one pound of suet very fine, and mix it with three-quarters of a pound of bread crumbs, half-a-pound of flour, one and one-half pounds of raisins, stoned, one pound of Zante currants, washed and dried, and a half a pound each of orange peel and preserved citron cut into shreds; stir all these well together with half a grated nutmeg and ten eggs well beaten. If boiled in a bag leave a little room for it to swell. Boil it for six hours, ornament with holly, pour brandy around it and set fire to it as soon as placed on the table. —[Toronto Mail.

CRANBERRY SAUCE.—Pick over the cranberries, put in a colander or sieve and wash through two waters; cook in an enamelled stew-pan with or without additional water. The water that remains about them after washing is generally sufficient to stew them properly. Keep a steady heat under the cranberries, stirring them up from the bottom frequently, as they are easily burned. When soft, mash them with the back of a spoon, and when quite shapeless take off the fire, and while very hot stir in gradually an ample quantity of nice brown sugar. They require much sweetening, but no other flavoring.

CRANBERRY JELLY.—Wash and pick over the fruit carefully, and boil it till very soft in water enough to cover it. Then strain through a hair sieve, and weigh equal quantities of the pulp and fine sugar. Boil this gently, and with care, that it does not burn, fifteen or twenty minutes.

On the Wing.

NORTH WALES.

(*Continued.*)

Having referred to South Stack and vicinity, the scenery and other interesting natural features, we will now touch briefly on Holyhead. This must have been one of the old Roman strongholds, as there still exists an old stone wall, six feet thick; it now partially surrounds the burying ground around the remains of a very ancient church or cathedral that has from time to time been repaired and altered, but portions of the old walls, etc., still remain. It is now the Episcopal Church, and must have been taken from the Roman Catholics. The old sexton informed us that it is claimed it was first built at the time that Matthew's Gospel was written. Be that as it may, old inscriptions and ancient dates are so traceable here that we are inclined to consider this relic quite an ancient as any we have seen belonging to the British Isles. And what may be of interest to some of the inhabitants of London, Canada, is the fact that in no ancient burying ground in Great Britain have we noticed half as many names of residents of that city as we traced on the old time-worn slate and stone monuments, in this old burial place. It is pleasing to us to look back into the past, and it may be of interest to some of our readers to know where their ancestors have been interred. The following are the names we took down that we could decipher;—Rogers, Harper, Owen, Griffith, Evans, Pritchard, Davis, Roberts, Mann, Williams, Ellis, Nailor, Harvey, Edwards, Martin, Lewis, Skinner, Hutchinson, Penras, Hughes, Gardiner, Thomas, Morris, Taylor, Hammond, Humphrey, Rowland, Percival, Watkin, Parry. Time would not allow us to decipher more, as these were mixed with many Welsh names that we could not pronounce, if we could write them. Maclgwyn Gwynedd was one of the princes of North Wales. Some of the Queen's ancestors are buried here. We leave this ancient relic, on which modern dates show that repairs have been made that are over 1000 years old.

We leave the dead, and take a walk down the Breakwater—a wonderful work. Here we met a workmen superintending some mason work, from whom we obtained the following:—His name was Hugh Jones. He worked on this breakwater twenty-three years, never having been one day off work during that time. The work has been in progress twenty-eight years; 1,700 men have been employed. There were five tramways to the mountains, and seven locomotives to draw the trains; a large number of engines were used in the hills to excavate and load the cars. The stones weigh from four to five tons, those on the top twelve tons, and one stone twenty-seven tons. This breakwater is about a mile long, carried out into the sea where the water is deep; the sea often was so rough as to wash these heavy stones away and prevent the progress of the work. You can only form a very crude idea of this gigantic work from any description that can be given; only a walk on the breakwater can give you any idea of its magnitude. It is erected to make a safe harbor, in expection of directing some of the Liverpool trade to this port. A fine hotel has been erected, but it is a monopoly, so that no railway or steamboat passengers can obtain any accommodation except from the company owning it. A long wall is erected to prevent people from approaching the town without great inconvenience; in fact, to Americans it looks like walling in and walling out, as if the majority of travellers could afford and wished to expend from $5 to $25 per day for obtaining accommodation, and only one hotel to be patronized. Lord Stanley owns large estates here. We have been informed that Stanley's Explorations in Africa, a book extensively sold in America, was an imposition that a person named Rowland wrote the work.

The Girl's Own Room.

As a medical man I have often the honor—an honor born of necessity—of seeing the inside of a girl's own apartment, and a single glance reveals to me very much of my patient's habits of life and character, and these in their turn assist me greatly in laying down a plan of treatment. But what, it may be asked, has a doctor to do with the composition or arrangement of one's window blinds or window curtains, or with the shape or framework of one's looking glass, or with the appearance or material of the carpet? Very much indeed, as I am prepared to show you. And not only with these, but with nearly every article that finds, or ought to find, a place in your apartment,

First, then, let me tell you that there are many things less inimical to human life than is dust. It is dirt in a dry state, it collects and harbors matter that cannot be breathed with impunity, nay, even the very germs of disease itself are produced by it.

Many a young girl sows the seed of future illness, which eventually proves fatal, by sleeping for a time in a dusty room. Hence, I say, if you value your health, shrink from dust as you would from a deadly foe. Don't harbor it; don't let it lie about anywhere; it finds its way readily in without encouragement, so take especial care not to bring it in, either on your dress or on your boots; give it as few places to rest in as possible; and lastly, see that it is removed every day. It must be most carefully *swept*, not *brushed*, from the carpet, probably after a sprinkling of moist tea leaves, and it must be *mopped* with a duster from the furniture. In this latter sentence I am careful to choose my

words. I might have said "switched" instead of "mopped," but if it be merely switched off, it only flies about for a time, gathers new impurities, and then comfortably re-settles. And, bear this in mind, for it is important: the furniture should not be dusted for fully half an hour after the carpet has been swept, for, however well the latter may have been done, some dust must have arisen, and this must have time to fall. I leave others to speak of the unthriftiness of dust, and the injury it produces to one's dresses.

After the dust has been removed from the furniture it ought to be rubbed over with a dry and clean duster, and, if possible, made to shine. The last thing to be rubbed up is the mirror or mirrors, and the more radiant these are kept the better. The mirror in a girl's room should be of the best quality, even though small, but those who cannot afford an expensive glass may, at all events, always have a bright one.

A thick carpet in your room may feel comfortable, but it is not really a healthy one. The window hangings should not be of thick material, which would harbor dust, and in summer, at all events, they ought to be as light and cheerful-looking as possible. Curtains of the bed and bed-quilts to match, if you please. The bedstead itself should be graceful in shape, and either French as to curtaining or half-tester. A bed without hangings has a kind of hospital look about it, while those terrible four post tents closely curtained all about are not fit for a girl's room; they seem only made for old, old men to die in.

If you want to be healthy do not have a too soft bed. Feathers for old folks; for the young a mattrass. And, remember, you will have a better night's rest if the bed clothes are light and warm than if they are heavy. Heavy blankets are as bad as heavy suppers; both conduce to restless nights, nightmares and a heavy head in the morning.

The window-blinds in a girl's room should not be constructed for excluding the light—the more of that the better—but merely for obtaining privacy. Probably the best for either winter or summer are Venetian. What I have said about light applies as well to fresh air. Do not be afraid of admitting it into your room by day, neither by night, unless damp, chilly fogs are about. I am sorry to say that thousands of kind and affectionate mothers spoil the health of their young daughters, and that, too, irretrievably, by keeping them so much in stuffy, non-ventilated rooms.

Articles of furniture should rather be few than over numerous, bearing in mind that every cubic foot of air is of the greatest importance. The ornaments on the mantelpiece should be few, but they may be tasteful. In winter a cheerful fire should burn in the grate; it ventilates as well as warms the room. And as soon in early summer as it is determined to dispense with the use of fires, the chimney should be clean swept, else the unwholesome smell of damp soot will often cause great annoyance. Some people try to obviate this by closely stuffing the chimney; they thus do away with a ventilator. Those girls who dwell in towns will ornament their grates in summer with some kind of fire-screens; dwellers in the country have the advantage, they have green boughs and flowers.

The walls of a girl's room should be graced by pictures. They ought not to look clumsy. They need not be expensive—water colours, engravings, and photographs, the latter framed, probably, simply with straw work and ribbon; or even birth-day-cards, if prettily done, help to throw a bit of light and beauty on bare walls. Scripture texts also look well, but much depends on the taste of the occupier. Again, what can be prettier than those little wall brackets of fretwork, with tiny ornaments of flower vases placed thereon?

Growing flowers look pretty, but they are not always wholesome. Those that are healthy to have in a room possess either no scent at all or a pleasant one; but cut flowers are charming.

In this short paper I have aimed at depicting, or trying to depict, what a healthy room should be. Depend upon this, that a bright and cheerful room helps at least to make a bright and cheerful inmate, and that cheerfulness and health are inseparable companions.—MEDICUS, in *Girl's Own Paper*.

Worry.

The disposition to worry is partly a matter of temperament and partly a matter of habit, often partly of both temperament and habit. Some people seem born to be in a worry all the time, others seem never to take anything seriously to heart; still others worry just enough to escape contingent troubles. Where worrying is a matter of temperament, the cultivation of sound philosophy with regard to the ordinary affairs of life may do much to check it. A firm and abiding sense of the wisdom and goodness of God will serve as an antidote to it, but the removal of legitimate causes of worry will not help matters at all. The battle is to be fought in one's own soul, and it matters little how slight the precipitating cause may be. One big worry will cure many little ones, as one big sorrow swallows up all lesser ones. Where worrying is a matter of habit, the only wise thing to do is to break the habit by forming one in the opposite direction.

If we planned our lives ourselves we might have good cause to worry. We try to plan them, but our plans are continually overruled and overborne by a Power above us. We "know not what a day may bring forth," and we know that the days are full of surprises and what we had not expected continually happens. It is right that we should daily take our bearings and see that we are steering in the proper direction, but having done this, keeping ourselves so is enough to occupy us, and we have no time to worry over dangers already passed or such as may be awaiting us. "Sufficient unto the day is the evil thereof."

Each one of us has just so much capital—intellectual, moral, spiritual, physical—and no more, to operate with in the life given us. So much of this as is needed in each day's work we should invest, and allow the rest to accumulate, wasting none of it, but investing it as it is called for by the exigencies of life. As life goes on we shall have ample opportunity to invest all our surplus of whatever sort, and whatever we waste, both principal and interest, will be subtracted from the sum total at our life's end. If all the time and all the spiritual and intellectual force wasted in worrying were summed up, what a grand total would it amount to! If to this all the time and power lost by the depressing effect of worrying upon the vital powers were added, how would that grand total be swelled! Hours and days are thrown away in worrying over the future trouble that never comes, and the past trouble that cannot be changed; and while we thus waste our capital of vitality, instead of providing positive good for ourselves real troubles overtake us and give us more things to worry over.

Neither worry nor repentance for sin will remove in this life all the consequences of its commission. These one must bear as well as he may. When we confess and forsake sin we are promised forgiveness, but we are not promised immunity from the results of our transgression, at least from some of the results in this life, and instead of worrying over this we should rather set ourselves to bearing it with fortitude, and "turning it into the nutriment of virtue." Doubtless Moses repented taking the life of that tyrannical Egyptian, and we cannot doubt but that he was forgiven, but he spent forty years in the desert because of it. We know David repented of the murder of Uriah and was forgiven, but the "sword never departed from his house," and the lives of his four sons were required for the one life of Uriah. St. Paul never forgot that he had once persecuted the Church, and was "more abundant" in labor to establish it because he had tried to destroy it. The alcohol drunkard, the opium drunkard, the glutton, the debauchee, may never be able to repair the injuries they have done themselves, their offspring, their fellows, by their violations of the laws of life, but when they have left off their evil ways and given all that is left of them to walking in right ways, worry over the past consumes the strength they need to live well in the present, and is purely wasteful. They must be content to take up the song of life in a lower key, perhaps in a minor key, and sing it as well as they may. They must be content to walk along the lower levels of life and leave the scaling of heights to those whose vital energies have not been sapped by indulgence in evil courses.

It is necessary that we should make precautions against evil; that we should look out and provide for contingencies; that we should make the ordinary preparations for what is in the nature of things likely to come to us, and having done this, the next best thing is to await the coming events with serenity and presence of mind. Worrying will only upset us, waste our powers, distort our mental vision and put us in such a state of mind as will effectually prevent the best use of our faculties.

Ornaments for the hair, judiciously and effectively arranged, are fashionable. Fancy shell pins are much used.

Pelisses of gray plush, lined with pink, are coming in vogue for babies' wear. The hood must match the pelisse, and be tied with soft pink satin strings.

Waists intended for wear with various different shirts are in favor. They are resorted to for both for home and dressy wear. If designed for the latter they are made in the coat style, but if for plain house-wear they are cut in jacket style.

The shoulder seams of dress waists are a trifle longer than formerly, and the sleeves are not gathered at the top—this fashion now being looked upon as very old style.

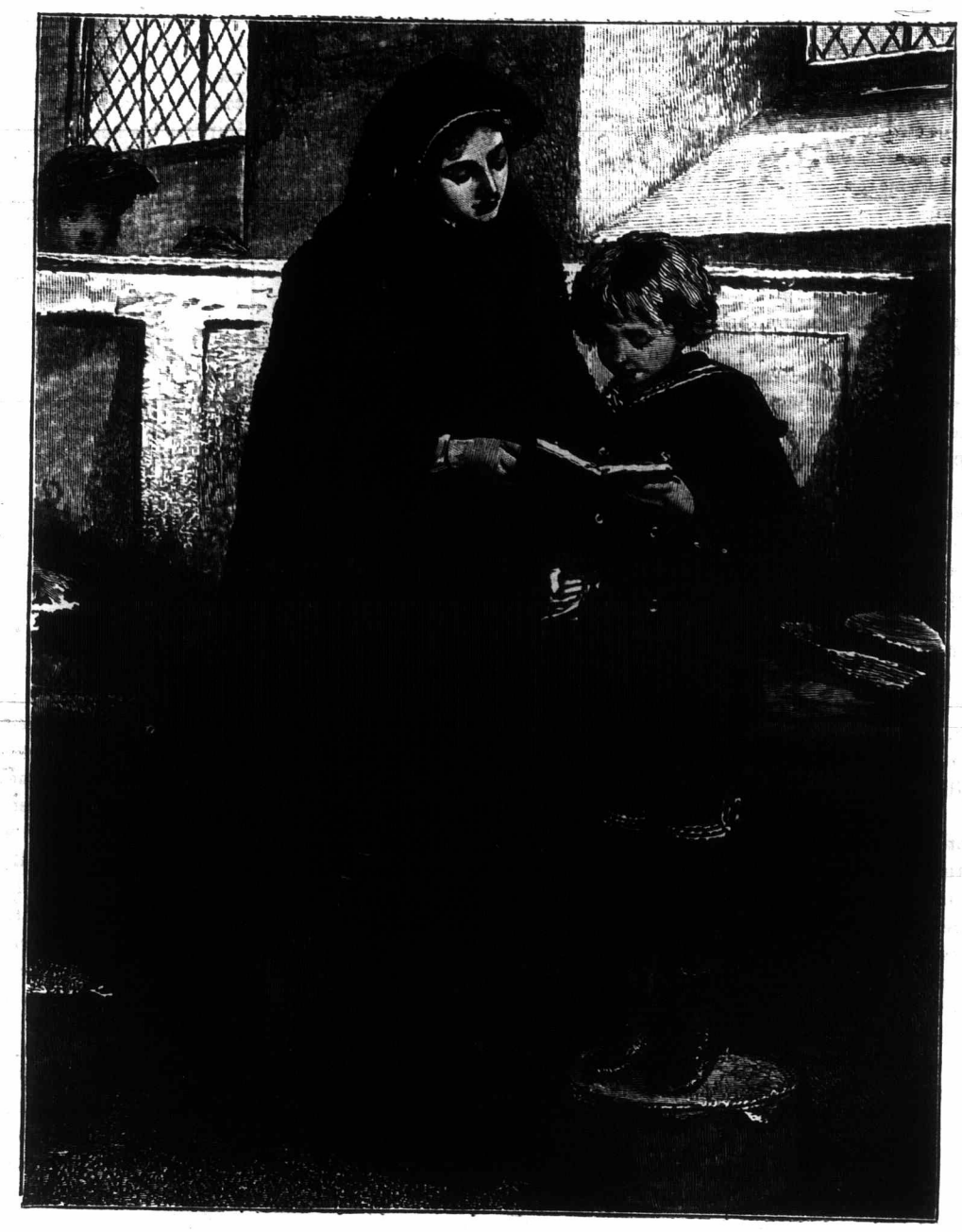
The Christmas Carol.

In the accompanying illustration you see the fond mother instructing perhaps her only son. That son may be the whole joy of her life; anything and everything that she can possibly do, even to the sacrifice of necessities, or even life itself, would be a willing sacrifice could she feel a certainty that it would be the best for her son. Why does she take him to church to sing the Christmas Carol? Because she desires to implant in him a higher hope, to teach him his duty to his God, as well as to man. She has a belief and a hope herself. She knows of no better place than the church, and of no better counsel or instruction than is given there. No man has yet found better than that given in the book of books, which no doubt she reads daily with her son.

If you remember your mother, had you a better friend? It is to you, the mothers of our children, to whom we must look for the stability of our nation. "The hand that rocks the cradle is the hand that rules the world." We cannot exert ourselves too much to maintain the honor, purity and sanctity of our homes. Do we not owe a debt of gratitude? We all should try to do some good with the blessings we receive. Our donations are voluntary. There are many calls on you. "Be not weary in well doing."

This great thanksgiving day—this day of days—is it not right to assemble and be joyful? There is a time for pleasure and games and amusements—a time to enjoy the good things that we are blessed with. When the frivolities are over, your friends have retired or have gone to their homes, there is a time to be meditative and thankful—to think of all the blessings you enjoy from the Great Giver, and why you commemorate this day—to think what has been done for you—think what you might have been had you been born in a pagan land. Compare the huts and hovels, the oppression and misery of the best of such beings with your own condition.

If rightly looked at, this Christmas time is one for the greatest enjoyment. It is especially the children's day, for it celebrates the birth of that Child who made a greater impress upon the world's history than any born before or since. Then when the Child became grown, how He loved children! And did He not repeat those words which have comforted so many mothers, when He said, "Of such is the Kingdom of Heaven." There is nothing about Christmas that is not a cause for thankfulness and joyousness. Then let us all have a "Merry Christmas." We know of but just one way to find the greatest enjoyment in such a holiday, and that is to make it "merry" or pleasant for others. Celebrate this coming Christmas by making some one, old or young, feel happy. The methods need not be expensive. Girls will know of some old man or woman to whom a pair of mittens, a comforter, or some nice thing they could make, would be acceptable. Boys cannot knit such things, but they can ask their father for a basket of those nice apples to take on Christmas morning to some poor people who have no fruit. The value of the gift is of no importance. It is to make such people feel that they are not forgotten. The day will not pass without being a "Merry Christmas," if they feel that some human being thinks of them.



THE CHRISTMAS CAROL—MOTHER AND SON.

Clothe the Children Well.

Let every father and mother now take up the subject of clothing the little folk. Think about the kind and quantity of clothing the children are to wear, and how they are to be shaped. The other day we saw two ten-year-old girls going to school. They were facing a pretty strong breeze, and both of them were compelled to hold their hats and skirts with their hands. The left hands held the hats while the right hands held the short dresses down. Such dressing of children is all wrong. We believe it is immodest. What would any reasonable person think of a grown woman walking about the public streets with her dress and skirts extending downward only to her knees, and then see her holding them down to keep the wind from driving her home through shame for the capers of her clothing? We believe in short dresses for young children, but surely half-way to the knees is short enough.

But, aside from the æsthetic features of this style of dressing girls, it is cruel and dangerous. Their entire legs are and must be exposed to every wind that blows. A dress that comes only to the knees is no protection against the wind. The necessary movement of the limbs in walking or running, is continually raising the skirts to catch the wind. This must be so, and that is why the girls above mentioned were holding their dresses down. Stockings and thin shoes on the feet; then nothing but stockings to the knees, and really little better than this to the waist. And yet these tender girls are expected to go to and from school in such dresses all along through the cold weather of the winter. It is shameful. We cannot understand how women, otherwise sensible enough, will send their girls out in such clothing. The feet and lower parts of the legs need the best and most clothing.

And the boys are better dressed only because each leg has its own separate covering and that is made small enough to be some protection. But from the knee to the toes, the boys have no advantage over the girls. The lower half of the leg must be exposed with only a stocking to cover it though there may be half a dozen thicknesses of cloth on the upper part of the body.

If people would dress more naturally, more reasonably, in accord with the real object of dressing—comfort, little graves would not accumulate so rapidly. We commend this subject to our readers, as one of the most important they can think about. Health is true riches. Health has real value, and is worth more than gold, because it can buy gold, but gold cannot purchase health. Clothe the children well.

His Testimony.

"Call the next witness," said the judge of a court in Iowa. As he spoke, a man took his place on the witness-stand. "Hold up your right hand."

"But, I——"

"Hold up your right hand, I tell you!"

The oath was administered.

"Now," said his Honor, "tell what you know about this case."

"Well, all I got ter say am dat Gineral Podgers he hab got home, an' he send me ober ter 'vite ye ter dinner, an' say fur ye ter be sho' to come, fo' dem 'sper ribs am er gittin' cold!"

Work Basket.

A DECORATED GOBLET.—An interesting home-made method of natural decoration consists simply in taking a glass or goblet and placing in the interior a little common salt water. In a day or so a slight mist will be seen upon the glass—hourly this will grow until in a short time the glass will present a beautiful appearance, the glass being enlarged to twice its thickness, and covered with beautiful salt crystals, packed one upon another exactly like some peculiar fungus or animal growth. It is necessary to place a dish beneath the glass, as the crystals will run over. The glass can be made additionally beautifully by placing in the salt and water some common red ink; this will be absorbed, and the white surface covered. No more simple method of producing inexpensive or beautiful ornaments can be imagined, and by using different shapes of vases and shades, an endless variety of beautiful forms can be produced.—[Scientific American.

PHOTOGRAPH CASE.—This is made the same shape as a handkerchief case, and should be of velvet or plush, about two fringes wide and five long; line with plain or quilted satin, and fold one finger's length over at each end for the pockets. Finish the edges with large silk cord, and sew a handsome bow in the centre if desired The outsides of the pockets should be embroidered with a handsome initial monogram or scroll design.

OTTOMAN COVER.—Take a piece of light gray felt cloth of the required size, and over this set a piece of black velvet, having a design of centre-piece, border and corners marked out on it and worked in button-hole stitch. The intermediate cloth is then cut away, and the outline of the design is finished with gold braid. Another pretty cover for ottoman or cushion is made of maroon velvet, with a cluster of Morning Glories embroidered in the centre, and a broken spray of the Trailing Arbutus worked in each cover.

LADIES' LEGGINGS.—Materials: Eight ounces of worsted and four knitting needles, No. 12; cast on ninety stitches, thirty on each needle; join in a circle and knit one round plain. Now work in ribbed stitch, two plain, two purl, until the leggings are about fifteen inches in length. Now begin to narrow by knitting together the first two stitches and the last two stitches of the round. Repeat this narrowing in every eight row nine times. You should now have seventy stitches in the round. Divide these into two equal parts, front and back, and knit the one half back and forth twenty-five times, always continuing the ribbed stitch. Bind off these twenty-five stitches, pick up the twelve side stitches and knit them plain; the remaining thirty-five stitches knit in ribbed stitch, and then pick up the twelve stitches on the other side. The next twenty-four rows continue in the same manner; this makes the gores plain and the front ribbed, narrowing every alternate row one stitch on each side of the middle part until all the stitches in the gore are gone. Knit the remaining stitches thirty rows more. Bind off and finish by crocheting an edge around. Sew elastic bands on to the under side of the gore.

A pair of chamois leaves for cleaning spectacles are very useful and easily made. Cut them the shape of the glass, but about half an inch larger all round. Finish the edges with wide apart button-hole stitches in colored silk; fasten the two together at one end with tiny cord and tassels. An initial or any fanciful design may be etched on the outside.

Answers to Enquirers.

MRS. T. B.—1. The refreshments for a wedding in the afternoon are arranged exactly as they would be for an afternoon "at home"—the wedding cake in the centre of the table, coffee, tea and lemonade, bread and butter, cakes, fruit, and ices if desired. 2. It is no longer customary to send wedding-cake to friends, unless to your own and your intended husband's immediate relatives.

WINTER.—1. A good cure for chilblains is to rub them gently with dry mustard-flour when they first appear. 2. You should not make expensive presents to gentlemen, and a trifle of your own work will be far more appreciated than any article you could buy. 3. Zinc may be cleaned with salt, which takes off the grease and dirt.

MADGE.—1. Make your worsted balls as follows: Take a silver or plated fork, and wind the wool over it forty or fifty times according to the size of the ball you desire; and tie it between the two middle prongs with strong dark linen thread, leaving a few inches of it to hold it by; then slip it off the fork, and clip it little by little, rolling it in the fingers until you have a perfect ball. 2. No. Napkin rings are not used for transient guests, as of course a napkin must be laundried before being used by another. It is only at a family table, when one is staying for some time, that the ring is used.

B. M. C.—It is usually in better taste when speaking to a lady of her parents to say "Mr." and "Mrs." When speaking to a child, however, one may always say, "Your mamma or papa," or "mother and father."

DAISY DEAN.—Black stockings are worn with any toilette. Please accept our thanks for your kindly expressed appreciation.

How to Ornament the Christmas Tree.

Last year in many cities and towns there appeared in certain churches and halls Christmas trees of marvellous beauty. The tips of the green boughs were glittering with crystals, and reflected the light in many beautiful colors. Some of these trees, in addition to the crystals, seemed laden with golden fruit, like an orange tree in an untimely frost or snow storm. Other trees were ornamented with hand-painted flags, of all nations.

The method of covering green twigs with crystals is a very simple and inexpensive one. Put into a bucket a pound or more of alum, and pour a gallon or more of boiling water upon it. Place the tree in such a position that the tips of the bough may remain in this solution for some hours, perhaps over night. Repeat the process until as many boughs are tipped with crystals as will make the tree very beautiful. Or cut off the twigs, crystallize them, and fix them again on the boughs.

The golden fruit is simply made by gilding English walnuts. Hammer a long tack into the end of the walnut by which to suspend it after gilding. Wash the nut with the white of an egg with a feather. Then roll it in gold leaf, or powder, until it is well gilded, or cover it with tin foil or imitation of gold leaf, as the real gold leaf is somewhat expensive.

Acted charades are popular as diversions, after the distribution of the Christmas presents. The popular word in England of late for an elaborate acted charade is "Counter charm"—(count) (err) (charm), the whole ending with an Oriental scene of a charm and counter-charm.

Pompous.

Modesty is an attribute of true greatness, and men of real learning are never pompous. Any freckled and saturnine school-boy can ask questions that it would puzzle a ten-volume encyclopædia to answer; and confusion is apt to overtake the pretentious individual who tries to impress his hearers with the false idea that he "knows everything in all the books."

A story is told of a certain bishop who addressed a large assembly of Sunday-school children and wound up by asking, in a very paternal and condescending way, "And now, is there a a-n-y little boy or a-a-n-y little girl who would like to ask me a question?"

After a pause he repeated the question, "Is there a-a-n-y little boy or a-a-n-y little girl who would like to ask me a question?"

A little shrill voice called out, "Please, sir, why did the angels walk up and down Jacob's ladder when they had wings?"

"Oh, ah, yes, I see," said the bishop. "And now, is there a-a-n-y little boy or a-a-n-y little girl who would like to answer little Mary's question?"

"Mighty Improvin'."

Molly Malone, a worthy washerwoman in the West of Ireland, used to say—and say almost invariably—after hearing a sermon on Sunday, that it was "mighty improvin'." One day, however, her clergyman, who was not quite content with this generality, spoke to her respecting his discourse, and Molly suddenly became what they call in Ireland "a little bothered." Nevertheless she got out of her difficulty with one of those parabolic answers which are such favorites with her class, and which, while it completely evaded the question, satisfactorily replied to it. "Well, Molly," said the clergyman, "you liked the sermon, you say?" "Oh, yes, your rivirence," was the reply; "it was mighty improvin'." And what part of it did you like best?" he continued. "Well, sure, sir, I liked every part," answered Molly. "But I suppose there was some portions of it that you were more struck with than you were with others?" persisted the parson. "In troth, plase your rivirence," said the old woman, "I don't remember any part exactly, but altogether 'twas mighty improvin'." "Now, Molly, how could it be improving if you don't remember any part of it?" asked the reverend gentleman. "Well, your rivirence sees that linen I've been washing and dhrying on the hedge there?" said Molly. "Oh, certainly," was the answer. "Wa'n't it the soap and wather made the linen clane, sir?" asked Molly. "Of course they did," said the rector. "And isn't the linen all the better for it?" asked the old woman. "Oh, no doubt of that, Molly," was the reply. "But not a dhrop of the soap and water stays in it. Well, sir, it's the same thing wid me," continued Molly—"not a word o' the sarmint stays in me. I suppose it all dhries out o' me—but I'm the better and claner for it, when it's over, for all that.

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES.—November has passed away, and the merry yule month is ushered in. How many memories come with the Christmas tide to us whose locks are becoming "powdered with the frosts of years," and as I look upon you, bounding in your merry play, with rosy cheeks and sparkling eyes, I half wish I were a boy again, back at the dear old homestead. I have had much to be thankful for; I have enjoyed many blessings, but in my heart there is a tender spot which sometimes likes to dream of the past, and, in so doing, longingly turns to the home of my boyhood days. I remember the little unpainted, unshod sled father made for us, which you of the present day would scarcely think worthy a glance; but to us it was "a thing of beauty" so long as frost, ice and snow lasted. And then what famous fun we had in the lofts sliding down the sides of great mows of hay and straw. I hope my little nieces have not altogether given up this sport—our sisters always came with us, and I am sure the good angels watched over us, or we should certainly have been killed. Your Uncle Tom was not the quietest of the family, I can tell you, but one day he was satisfied with sport. Would you like to hear the story? Well, one day as we were playing in the barn, I noticed the hay was cut in a new way. A portion of it had been used, and then for about the depth of two feet a perpendicular bank of hay was left—just like a step about two feet high. As all boys will do, I thought this a fine place to exercise my skill in turning a somersault. You know just how I would go about it, don't you? First placing the top of my head on the edge of the step, then a hand extending on each side with the whole weight of the front part of the body resting on them—the body and "lower extremities" in a position more boyish than graceful—one, two, three—over I go! O—g—h—no ah—n—where am I? What is the matter? I see stars. My neck is broken. I've had enough of somersaulting for one day; and I've learned a lesson. Would you learn it? *When you have to go down a step, do it in a proper way.* There's more in that, boys and girls, than you think.

But all these days of light-hearted fear and merriment passed away. I found that to accomplish anything however small, work had to be done. I learned from observation and books that men who were successful worked hard for their success, no matter what position in life they had to fill. Dickens, a famous writer, whose acquaintance I hope you will some day make, if you have not done so already, has a character in one of his books called Wilkins Macawber, who was always waiting for something to "turn up," and not until he "turned up" something for himself did the good luck come. Perhaps you are longing for some opportunity to improve yourselves, and Macawber-like, waiting for that opportunity to come. Listen to these words: "That you make the most of present opportunities is the surest test that you would use well greater ones if you had them." In your quiet homes on the farm, where you can spend evening after evening without interruption, do you know, my dear boys and girls, you have an opportunity for self-improvement that but few save farmers' sons and daughter know. I beseech of you, as one who is interested in your truest welfare, do not waste these precious evenings. William Ewart Gladstone, than whom probably lives not a busier man, says: "Believe me when I tell you that thrift of time will repay you beyond your most sanguine hopes, and that the waste of it will cause you to dwindle alike in intellectual and moral stature." And an infinitely higher authority, weighty as his may be, bids us to live "redeeming the time." Don't neglect the cultivation of the busy brain; it will make you a more useful man—a truer woman. I would like to take each one of you by the hand and bid you God-speed.

And now, a farewell word for 1886. We have had many pleasant hours together, and we shall ever cherish its memory. It has served its purpose well, and we would not bid it stay as it rushes on to the limitless gulf of the past. Ere it closes, we wish you, heartily and sincerely, *a Merry Xmas*, and let me here whisper to you one more word. In your gifts remember those whom other people are likely to overlook. A little card, any small present which you can purchase by means of self-denial, sent to one who does not often receive such things, will make, for the giver and receiver, a truly happy Christmas, and will usher in a glad new year.

Next month I shall publish the names of the lucky prize winners for the last half year, and also offer a variety of prizes for the coming year. Now, I hope you will all work hard, and send me some real good puzzles for January, remembering that "A good beginning makes a good ending." UNCLE TOM.

Puzzles.

2. TRANSPOSITION.

Of living things the smallest
Without a doubt I am,
Transpose and find to issue,
Or send in circulation;
Again transpose, a paragraph,
A note, a memorandum:
Transpose once more and you will have
What was, what is, but what will be no more.
FAIR BROTHER.

3. DECAPITATION.

A dignity of the church behead,
To narrate you'll have instead.
Again behead, I'm "lofty, proud,"
Or else "exalted" by a crowd.
Once more behead, 'tis "recent, slow,"
Truly this is the meaning now;
I am "The goddess of mischief" true
When beheaded again by you.
FAIR BROTHER.

4. TRANSPOSITION.

Phae no roem odow!—het nwid si clilh;
Tub elt ti sthilew sa ti llwi,
Ll'ew peke rou mcrsasthl rerym tills.
Chae gae ash meeedd het ewn-robn aery
Teh tifetst mite rfo tesalp reecb.
Dna elwl rou isrtihaen riess fo dol
Dovel hewn hte arey sit suroec ahd doller,
Dna gourbth hitleb htmasrscl kacb igana
Hitw lal shi posthileab narit.—[LTEARW TOSCT.
E. MANNING.

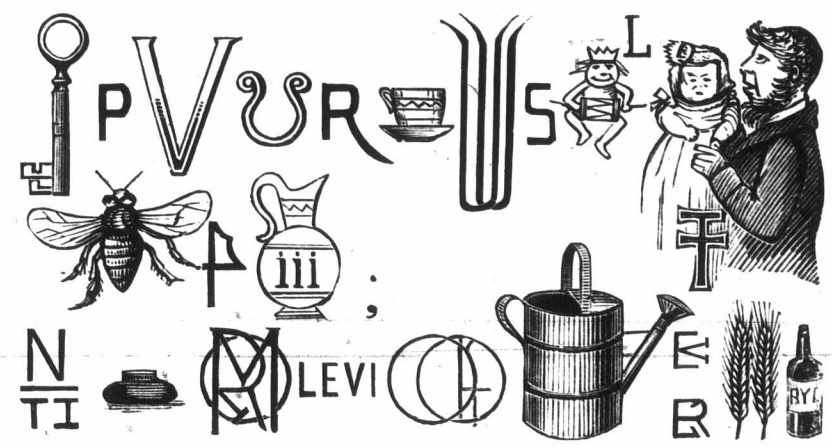
5. CHARADE.

One summer eve I lay me down
A little nap to take;
Such a terrible dream I had
That I with fear did quake.
'Twas this: The captain paced the deck,
Nor uttered he a word;
"What fearest thou?" a mate cried out.
Quoth he—"I fear a *third*,
And that at day is bad enough,
But by no means the worst;
'Tis nothing that can be compared
With a *third, second, first.*"
But, lo! the captain looks more bright,
A vessel now espied he,
And as I waken from my fright
A *total* is singing beside me.
ADA ARMAND.

6. LOGOGRIPH.

A word of command is my first,
Which in battle you often may hear;
Beheaded, with flowers I am decked
To honor some patriot dear;
Curtailed, if in Euclid you look,
You'll read there of me, never fear.
Now make as at first and transpose,
And beauty claims me as her own;
Beheaded, to you I may come,
Or even to the king on his throne;
Behead and transpose, and in my place
I am, dear reader, to deface.
ADA ARMAND.

1—ILLUSTRATED REBUS.



7. TRANSPOSITION.

Eb dink, tiltie hilodern.
Ot hoste owh ear opor;
Nda er'en gaaistn rorswo
Dna tanw hsut hte orod.
ANITA S. COTE.

8. DROP-VOWEL PUZZLE.

Sm-ll s-rv-c- -s tr- - s-rv-c- wh-l--t l-sts.
-f fr- -nds, h-w-v-r h-mbl-, sc-rn n-t -n-.
Th- d- -sy by th- sh-d-w th-t -t c-sts
Pr-t-cts th- l-ng-r-ng d-w dr-p fr-m th- s-n.
WM. WEBSTER.

9. HALF-SQUARE.

To help; to endure; a notch; to resound; expresses contempt; a pronoun; a consonant.
HENRY REEVE.

10. NUMERICAL ENIGMA.

My whole is composed of 31 letters and is a true saying.
My 1, 2, 3, 4 means manner.
My 5, 6, 7, 15 means to value.
My 25, 19, 12, 9, 9, 10, 3 is to echo.
My 30, 26, 20, 21, 11, 22, 18 means relics.
My 18, 13, 5, 21, 17, 24 is a narrow pass.
My 16, 27, 28, 13, 31 means to squander.
My 14, 8, 23, 24 command silence.
ARTHUR T. REEVE.

Answers to November Puzzles.

1. Reserve severe—sever.
2. Apple, plum, melon, tomato, peach.
3.
C
Be
Ham
Hare
Baron
Cement

4.
LAKE
ARENA
KETTLE
ENTITLE
ALTHEA
ELECT
EATS

5. Trees can almost change the face of nature.
6. Matrimony.
7.
M
i
n
n
tnetni
a e
delsiM
a a
b y

8. Pardon.
9. Stork.
Heron.
Crane.
10. In the world's broad field of battle,
In the bivouac of life,
Be not like dumb driven cattle,
Be a hero in the strife.

Names of those who have sen Correct Answers to November Puzzles.

Mary Morrison, Anita Cote, Emma Dennee, Chas. E Smith, E. Manning, Arthur T Reeve, Ada Armand, Drusilla A. Fairbrother, Robt. J. Risk, Henry Reeve, Wm. Webster, Robert Wilson, Minnie Cousins, Charlie Johnston, Frank E. Ferguson.

School-Mates' Admiration.

While a party of Alpine climbers is ascending Mont Blanc, the visitors at Chamouni gaze at them through the telescope which stands in the public square. Not less intense is the interest with which men gaze at those who stand out on some one of life's peaks, the summit of which they have gained after years of toil. But none will gaze more admiringly upon the eminent men than his old school-fellows.

When Dr. Moffat returned to England, after fifty-five years of missionary work in South Africa, he was honored and feasted by civic and ecclesiastical dignitaries, anxious to express their admiration of "the venerable father of the missionary world."

He received these expressions with the modesty of true greatness. "I never thought," he said on one occasion, "when I was working in South Africa, to see a day like this. I simply did the work of the day in the day, and never thought that any one in England would think of me or it."

But one expression of admiration, that of a schoolmate, deeply moved him. Sixty-three years after leaving Carronshore, he visited this home of his boyhood. A little, quaint, old-fashioned Scotch woman ran up to him, seized him by both hands, and stood looking at him, speechless with excitement, exertion and chronic asthma. At last she gasped out:—

"Are—you—really—the—great Moffat?"

"Well, I believe," answered the doctor, with a benign smile, "I must be the person you refer to, whether great or not; but why do you ask?"

"Why! Because I was at the schule wi' ye. My name is Mary Kay, and you'll surely come to mind me; I sat in the class next ye, and ye often helped me wi' my lessons.

"I have aye keepit my e'e on you since you left Carronshore, and I'll let you see a lot of your ain likenesses. I was aye sure you would come back to see this place some day; and though I didna expect ye the noo, I'm fair daft wi' joy at seeing ye."

She produced an old volume of Baxter's "Saint's Rest," which she had made into an album by putting between its leaves numerous wood cut likenesses of Dr. Moffat, clipped from illustrated almanacs, missionary magazines, and pictorial papers.

"They are all like him yet," said she, turning over her art treasures, "except that he wears a beard, and I never could thole [endure] those lang beards. Although," she added, apologetically, "to be sure, John Knox had a lang beard, just like yersel'."

Cruelty to Parents.

The newspapers occasionally mention instances of cruelty to children committed by parents and teachers. Such cases excite all the more indignation from their rarity, for, as a people, Americans err on the side of indulgence rather than of restraint and discipline. One rarely hears of a cruel parent or teacher.

But it is often the case that boys are cruel to those whose constant endeavor is to do them good. A few lawless, thoughtless boys make the life of a teacher a daily martyrdom. We have seen an aged professor, because he was aged, put to cruel shame by barbarous students. We have known mothers whose gray hairs were brought in sorrow to the grave by the unspeakable cruelty of their children.

In Montreal, some weeks ago, a veteran colonel in the British army, aged eighty-eight, was compelled to appear against his son, who was accused of forgery. He took his place in the witness-box, looked at his boy in the dock, heaved a deep sigh, and fell dead to the floor. The scene was of such a harrowing nature that one of the jury fainted and the judge went to his room in tears. Scarcely any degree of cruelty of a parent to a son could cause such exquisite misery as this.

There was a melting scene in a New York police court-room the other day. A mother complained of her boy, seventeen years of age. "He drinks," said she to the magistrate. "He will not work, and frequently comes home and threatens me, until I am afraid he may hurt me."

She said this in German, and the interpreter translated it to the court. The justice said; after due admonition,—

"Tell the old lady that I mean to make her the jailer of her son. When she wants him back, let her come to me, and her wishes shall be obeyed. I'll make his time six months, but she can come to me before that if she wishes to do so."

When these words were interpreted to the heart-broken mother, she sobbed some words in German.

"What does she say?" asked the magistrate.

The interpreter replied, "She says, 'And has it come to this?'"

The justice turned to the cruel youth and sternly said:—

"Here, young man, while you are digging paupers' graves, remember how your mother looks at this minute!"

This was a terrible case. What a torrent of agony swept over that mother's soul as she said: "And has it come to this?" What a tale of past suffering it revealed, beginning at the time when he was a pretty, wilful boy, whose saucy tricks amused her, and she failed to train him to obedience! Perhaps remorse was mingled with her grief and shame.

For, in truth, there is cruelty beyond that of which bad boys are guilty. It is the cruelty of permitting children to grow up lawless, ignorant and base, because parents have not force of character enough to insist on respect and obedience from their children.

The New Baby.

A little Southern girl who had been for five years an only child was surprised, and not agreeably surprised, the other day, by the appearance of a baby sister.

After regarding it attentively for a few moments she said to her mother, "Mrs. Rogers," referring to a near neighbor, "is a very good lady, isn't she, mamma?"

"Yes, very good, dear."

"And she's awfully kind to me. She gived me some lovely sugarcane," the small schemer went on, "and I want to give her something."

"Well, send her a basket of oranges"

"Oh! I don't spect she likes oranges. But she must like children, 'cause she's got a lot of 'em. Let's send her this baby."—*Harper's Bazar.*

Little Ones' Column.

"Santa Claus."

"He comes in the night! He comes in the night!
He softly, silently comes;
While the little brown heads on the pillows so white
Are dreaming of bugles and drums.
He cuts through the snow like a ship through the foam,
While the white flakes around him whirl;
Who tells him I know not, but he findeth the home
Of each good little boy and girl.

"His sleigh is long, and deep, and wide;
It will carry a host of things,
While dozens of drums hang round on the sides,
With the sticks sticking under the strings.
And yet not the sound of a drum is heard,
Not a bugle blast is blown,
As he mounts to the chimney top like a bird,
And drops to the hearth like a stone.

"The little red stockings he silently fills,
Till the stockings will hold no more;
The bright little sleds for the great snow hills
Are quickly set down on the floor.
Then Santa Claus mounts the roof like a bird,
And glides to his seat in the sleigh;
Not the sound of a bugle or drum is heard
As he noiselessly gallops away.

"He rides to the east, he rides to the west,
Of his goodies he touches not one;
He eateth the crumbs of the Christmas feast
When the dear little folks are done.
Old Santa Claus doeth all that he can;
This beautiful mission is his;
Then, children, be good to the little old man
When you find who the little man is."

Two Women and a Mouse.

"Frances," said Aunt Pennifeather, in a terrible whisper, "are you asleep?"

I started from the bed. "Oh, no; what do you want?"

"I hate to have you get up," said she, peering over the banister at me, as I peered up at her, "but there's something in the bed. I think it's a mouse."

Now Aunt Pennifeather has an uncomfortable degree of moral courage, and in that strength of spirit that holds its own against grief and pain, or the great mysteries, she is magnificent; but confront her with a creeping thing and a child could lead her.

"Why didn't you double him up in the bedclothes?"

"It has got in the pillow-case, Frances. Oh, don't let him out!" jumping upon that throne of necessity—a chair.

"Don't scream, Aunt Pennifeather, I have the end secure, but it isn't as plump as a mouse. I believe it's a rat. I'll take him to the window and shake him out."

"Oh, Frances, be careful! Oh, I see him. Don't let him fly out!"

But the thing wouldn't shake out; and as the children were now aroused, scurrying around in their night-gowns and uttering little squeals, and their father shouted from below, "What's the row, Fan?" I concluded to take the object to him. The Captain jumped out of bed and seized a cane. I filled the bath-tub with water, while he passed his hand quickly over the protuberance; but it stuck fast.

"Shake, Frances!"

A dark thing fell into the water and was instantly submerged by a blow from the cane. It rose defiantly. Another blow with the stick.

"Hold it under the water," shouted somebody.

"Is it dead?" squealed Aunt Pennifeather, behind the crack of the door.

"Dead?" roared the Captain; "it has been dead a hundred years. Take your old black kid glove, and don't try to pass it off for a wild animal down here."—*Detroit Free Press.*

Old Age and What of It.

Where is the line that marks youth from middle age, the prime of life from creeping old age? Some of us frankly admit we are "getting along in years," or "losing our faculties?" and have reached the "shady side of life," yet we hardly believe the facts we affirm.

We grow old so imperceptibly, pass from one stage to another so quietly we hardly know when we began to be "middle-aged people," or can date when we ceased to be called "young folks."

Somewhere, I once read of a lady who, in a crowded street, was rudely jostled by the crowd and some one, roughly but not unkindly, said to her, "come, old woman, pass on a little faster." The new title startled her. She had never thought of herself in that light, but soon catching a glimpse of her face in a shop's mirror, was constrained to admit she had reached the guide board of life, and her features bore witness of the weight of years, which authorized any passer-by to call her "an old woman."

A Lesson in Spelling.

The following short sentence was dictated by the late Lord Palmerston to eleven British Cabinet Ministers, not one of whom, it is said, spelled it correctly:—

"It is disagreeable to witness the embarrassment of a harassed peddler, gauging the symmetry of a peeled potato."

And Lord R. Cecil, in the House of Commons some time ago, quoted the following lines which he said were given as a dictation exercise by an assistant commissioner to the children of a school in Ipswich:—

"While hewing yew, Hugh lost his ewe,
And put it in the *Hue and Cry*,
To name its face's dusky hues
Was all the efforts he could use,
You brought the ewe back, by-and-by,
And only begged the hewer's ewer,
Your hands to wash in water pure,
Lest nice-nosed ladies, not a few,
Should cry, on coming near you, 'Uh!'"

W. W.—What is good to rid canary birds of lice and keep them off? Ans.—Take fine flowers of sulphur, and dust it into the birds' feathers with the fingers, and hold it a few minutes in a silk handkerchief in the warm hand. In the meantime, let another person wrap the cage up closely in paper, leaving the bottom open, put a quantity of sand on the floor of the cage, and a piece of hot iron on that, and sprinkle sulphur on to it, leaving it to burn for five minutes. Keep the paper close for the fumes to penetrate the crevices, then air it, and return the bird. Once a week spinkle sulphur on the bird as long as lice or fleas are seen.

A Christmas Speech.

BY A LITTLE GIRL.

"A merry, merry Christmas!
A merry Christmas, oh!"
So sang a little maiden
Whose face was all aglow.
"I am so very happy
This bright and joyous morn,
The dearest and the gayest
I've seen since I was born.

"The holidays are many,
But this one is the best,
Because—I think—yes, Christmas
Is better than the rest.
Why is it so, I wonder?
Just let me think a bit,
And see if on the reason
My fancy cannot hit.

"I sometimes think my birthday
The dearest holiday,
Beaause I have such presents,
That make life seem so gay;
But it would seem too selfish,
And make life all conceit,
To settle on one's birthday
As best of all to greet.

"The holiday for soldiers
Is Decoration Day,
That comes in such sad beauty
In sweet and flowery May.
I think the splendid soldiers
Deserve all words of praise;
And, though 'tis patriotic,
'Tis not the best of days.

"And then that day in summer—
That dreadful holiday—
The First, when wild confusion
Holds everywhere its sway—
When fun is tame and silly
Unless it's only noise;
For me it wouldn't answer,
Although it might for boys.

"Thanksgiving Day is nicer,
For that seems half and half,
With not enough of Sunday
To make it hard to laugh.
It seems a day too serious
To let my joy flow free,
And so I ask the seasons
A happier day for me.

"The next—and that is Christmas—
Yes, that's the holiday
That's better than all others,
Whatever you may say.
My pleasures all are sweeter,
And brighter all my plays,
Upon dear merry Christmas,
The best of holidays.

"And so, although I'm happy
On every holiday,
The evergreen and holly,
The faces bright and gay,
Make all my play seem nicer,
And all my thoughts more blest;
So Christmas is the fairest
Of all the days, and best."

Notices.

We have just received from John Hope, Esq., manager of the Bow Park Herd of Brantford, Ont., his catalogue of this celebrated Herd of Pure-bred Shorthorn Bulls. He informs us they are the finest lot ever bred at Bow Park; 10th Duchess of Hillhurst has given them a fine red roan calf by 3rd Duke of Whittlebury.

The attention of Carriage Builders and users is directed to the advertisement, in another column, of the Adjustable Sand-Box and Improved Concord Axle. These Axles are far superior to any hitherto placed on the market, and are so acknowledged by all practical carriage builders who have given them a trial. The increasing demand for them proves their superiority over all others. Anyone addressing A. F. MILES, Stanstead, Que., will receive a cut showing the adaptibility of the Sand-Box, and the preference for the Axle.

HOW TO GROW STRAWBERRIES.—We are in receipt of an illustrated work on the above subject by Geo. R. Knapp, published by H. D. Watson & Co, Greenfield, Mass: 60 pages, price 25 cents.

We are in receipt of a well written and well illustrated treatise, entitled "Field Notes on Apple Culture," 90 pages, published by O. Judd Co., New York. The author is Mr. L. Bailey, jr.

Commercial.

THE FARMER'S ADVOCATE OFFICE,
London, Ont., Dec. 1, 1886.

The past month on the whole has been cold and stormy, and farmers who did not have their roots up by the 9th or 10th will have had some trouble in getting them cared for as they should, besides making it very unpleasant and tedious work. In our experience all root crops should be out of the ground and pitted before the 10th of November; some farmers make a point to have them up by the 5th.

WHEAT.

The wheat trade remains much the same as it has been for the past six months, practically in a rut, and not much machination on the part of dealers to get it out. Cables come strong with the tendency of values upward. There is a much stronger feeling in wheat in Liverpool, and the market tends upward, with a good demand. Stocks of wheat in Great Britain are light and millers are buying from hand to mouth.

The London, Eng., Shipping Gazette says:—At all the Provincial markets held during the week, short supplies of home grown wheat are reported which are firmly held by farmers. In some markets a good demand was experienced at full prices, while in others an advance of 6d@1s has been obtained on all samples. The fact is, country millers find it difficult to keep themselves supplied, and as there is some demand for their flour so as to freshen up the American by mixture, they have to be careful not to get over sold. For foreign descriptions the trade also has been very firm, but not so active as in the middle of last week. All qualities of good dry wheat, especially Indian, have improved in value, and are 6d to 1s dearer on the week; and as the consumption since harvest has mainly fallen on foreign descriptions, stocks in granary have somewhat diminished since that period.

The Montreal markets are quoted as follows: The grain market has gone wholly into winter quarters and is without animation, values being greatly nominal. No. 1 hard Manitoba is quoted at 84c@86c and the nominal value of red, white and spring is about 82c. In New York Canada rye is quoted at 56c@57c, No. 1 Canada barley at 75c@76c, and No. 2 do. at 71c@72c. We quote: Canada red winter wheat, 81c@82c; white winter, 80c@82c; Canada spring, 80c@82; peas, 57½c@58c per 60 lbs; oats, 27c@28c per 32 lbs.; rye, 45c bid; barley, 55c@60c; corn, 54c@55c, duty paid, and 47c in bond.

The flour market has remained without essential change, but a fair local business has been done at about quotations. Sales mentioned include 250 brls. patent at $4 50, one car choice superior at $4, 100 brls. spring extra at $3.45, two cars Manitoba strong bakers' at $4.30, and seven cars bran at $1.13.

In reviewing the wheat trade, the London Miller says: "Opinion in England has perceptibly advanced during October, in the belief of a higher level of values being about to manifest itself. We do not believe that the year will close without American opinion displaying a similar progress in appreciation of what are the plain facts of this campaign, namely, that all grain grown will be wanted,

and that all grain which is really wanted should command a fair price."

Country dealers and storekeepers are complaining very bitterly of the lack of the usual volume of farmers' purchases occasioned by the refusal of agriculturists to accept current prices for their produce. The following letter taken from a leading commercial paper is very much to the point in question.

This letter is from a dealer in Peterboro' County:

"There is one thing which is a great drawback to the storekeeper in these parts, and that is our farmers holding on to their cattle and produce when they are offered the market price—saying that they must have bigger prices, and all this time telling the storekeeper is impossible to pay 'until they sell something,' when in fact they are not trying to sell.

"Yet if the storekeeper buys anything from the farmer the latter must have their pay at once. We storekeepers have to sell our goods at the market price, no matter if it is high or low, and I cannot see why the farmer should not have to do the same."

The country dealer of these modern days should no longer be expected, as was the case in the olden times before railways, to advance goods to farmers and wait a twelvemonth for his pay. Markets for all kinds of produce are now too near every farmer's door to leave him any excuse for delay in marketing his produce; besides, the country roads are nearly, if not quite, as passable in the fall as the winter months. Further, the profits of the storekeeper in these days is not such as to allow of these long credits. The farmer who holds his produce for a higher price when he should have it sold and pay his debts is just as much a speculator as the man who buys wheat in Chicago with the idea that the price will advance. They are both in the same boat, only there is probably this difference, that he who buys in Chicago is speculating with his own money, while the farmer who holds his produce for higher prices and does not pay his bills is speculating with other people's money.

LIVE STOCK.

A change for the better has come over the British live stock trade, and our special cables to-day indicate an improved trade and a more healthy state of affairs, which has been brought about by diminished supplies from all quarters, which has enabled the markets to absorb much of the former excess and created a more active demand, so that the probabilities now point to better markets for the last shipments than seemed possible a week ago. There has been an improved demand all round at higher prices. Receipts of cattle from Canada and the United States have fallen off, in fact have been light, while the receipts from elsewhere have also materially decreased. Offerings, therefore, have been smaller and trade much better. At Liverpool to-day there was a steady demand at an advance of half a cent per pound, and a better clearance was effected than for a long time. The market closed steady at the advance. Prime Canadian steers were at 10½c, fair to choice grades at 10c, poor to medium at 9c, and inferior and bulls at 6½c @ 8c. The sheep also was stronger owing to light supplies. At Liverpool to-day there were small offerings and a fair demand, values showing an advance of one cent compared with two weeks ago. Best sheep were at 13c, secondary qualities at 11c @12c, merinoes at 10½ @11½c, and inferior and rams at 8c@9½c.

DRESSED HOGS.

The market for dressed hogs is steady and the demand fair; London prices are $5 to $5.50, Montreal $5.75 to $6.10.

CLOVER SEED.

The market for clover seeds can scarcely be said to have opened as yet. While there has been a few parcels offering, buyers are not anxious for business, from the fact that all the English and continental reports are very low and depressing. So much depends upon the crop both in this country and the States, that it is simply impossible to form an opinion. If prices should rule low, as everything indicates at present, the home demand will be much heavier than if prices rule high. Last year there was no export enquiry whatever for red clover, but on the contrary there was some 40,000 bags imported into the United States from Europe. The crop of seed in the States is estimated to be an average one.

CHEESE.

The market for cheese may now be said to be over for this year, and we think that dairymen have every reason to feel satisfied. The trade has been a healthy one, with a steady upward tendency from the time of opening till the close. It is true the dry weather has shortened the make very much in some sections, yet this can be very largely met by good management and forethought on the part of the dairyman sowing and feeding corn or some other green feed during dry weather; and it pays, too, no matter what the croakers may say.

BUTTER.

The Montreal market is quoted as follows:—Mail advices, dated November 20, report Cork butter 1s@2s dearer; firsts 107s, seconds 94s, thirds 87s, and fourths 76s. Superfine mild-cured firkins, however, were 1s lower at 114s. The London market on same date was reported better, with finest Danish at 137s and little sound American offering. Bristol advices of November 19 quote finest creamery 112s@117s, August do. 105 @110s, and Ontario dairy 75s @ 85s. In this market to-day there was nothing of interest, transactions being limited to the local trade. Some medium Townships sold at 16c.

	c.	c.
Creamery, fancy	0	@25
" choice	0	@24
" good	22	@23
Townships, selected	00	@21
" finest	19	@20
Brockville, finest	18	@19
Western, finest	15	@18
" fair to good	12	@14
Low grades	10	@11

PRICES AT FARMERS' WAGONS.

Toronto, Dec. 1, 1886.

Wheat, fall, per bushel	$0 74	0 75
Wheat, spring, do.	0 74	0 76
Wheat, goose, do.	0 68	0 69
Wheat, red winter, per bushel	0 74	0 76
Barley, do.	0 45	0 58
Oats, do.	0 33	0 34
Peas, do.	0 52	0 63
Dressed hogs, per 100 lbs	5 25	5 75
Chickens, per pair	0 35	0 45
Butter, pound rolls	0 20	0 23
Tallow, (rough)	2	
Tallow, (rendered)	4½	
Eggs, fresh, per dozen	0 19	20
Potatoes, per bag	0 80	0 00
Apples, per barrel	1 25	2 50
Onions, per bag	1 75	0 00
Carrots, do.	0 40	0 50
Turnips, yellow	0 30	0 40
Turnips, white	0 30	0 40
Cauliflowers	0 50	0 75
Cabbage	0 30	0 40
Beets, per bag	0 20	0 60
Radish	0 20	0 00
Tomatoes	0 70	0 75
Hay, per ton	9 00	15 00
Straw, "	8 00	13 00

Hides and Skins.

HIDES—Green abundant and 25c. lower for No. 1 and No. 2 inspected. Cured also are easier; cars have sold at 9½c., with none offered for same figure at the close.

SHEEPSKINS—Prices of the best green advanced 10c. or to 90c. to $1; country lots offered freely, and usually ranging from 75c. to 90c., unless very dry.

Following are quotations:—Hides, No. 1 inspected steers $9; No. 1 inspected cows, $8 25; No 2 inspected, $7.25; No. 3 inspected, $5; calfskins, green, 11c. to 13c.; calfskins, cured, 13c. to 14c.; calfskins, dry, 11c. to 13c.; skeepskins, green, 65c to $1; wool, super., 23c; extra super., 28c.; wool pickings, 9c. to 10c.; tallow, rough, 2c.; rendered, 4½c. to 4⅝c.

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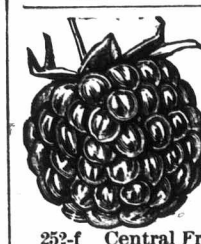

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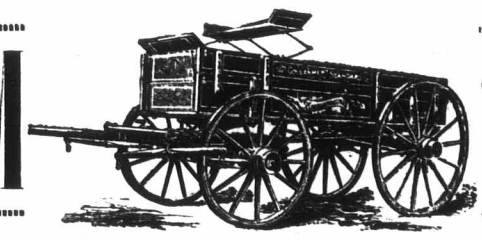

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HOME MAGAZINE,

FOR 1886.

VOLUME XXI.

WILLIAM WELD,

EDITOR AND PROPRIETOR.

OFFICE--360 RICHMOND ST

LONDON, CANADA.

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