

1881.

ERS

ine

Nov. 17, 1880.
 Brantford, Ont.
 First Champion
 purchased first by
 then purchased
 know the Engine
 as ever. We
 is year, and did
 ng that time on
 he only expense
 governor. This
 and was not well
 am well satisfied
 t, but wish I had
 boiler is perfectly
 m it since it left
 ave a number of
 oilers thrashing
 n do the work we
 and water or as
 from 30 to 50
 her Engines can
 ng near the lake
 fair of the lake,
 barn, a Horizon
 g further up the
 n, with the wind
 e set the barn on
 tor, grain and
 name of Israel
 ain away, and
 whiskers burned
 for Mr. Marlott,
 as the confidence
 We know it is
 t in the reservoir,
 could not be kept
 ming of a tap to
 perfectly satisfied

L. ANGER.

ER.



ON ENGINE.

NOTICE.

FOR 1881.

our Champion
 ear purchased iron
 n the celebrated
 f Essen, Rheinish
 2,000 men are em-
 Krupp writes as

200 fire-box plates
 sent to Brantford,
 that the following
 here with a number
 of circular giving
 ate.

oton. Call and

nada.

FARMER'S ADVOCATE

PERSEVERE SUCCEED

AND HOME MAGAZINE

VOL. XVI.

LONDON, ONT., JULY, 1881.

NO. 7.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

THE EXHIBITION NUMBER

—OF THE—

Farmer's Advocate

AND HOME MAGAZINE

FOR 1881

WILL BE ISSUED ON OR ABOUT THE 21st SEPTEMBER NEXT.

60,000 COPIES!

Our fifth annual issue of this fast increasing and most successful advertising medium will be the best one ever issued. While thanking our patrons of former years, and the patrons of the ADVOCATE, for their confidence in our endeavors to promote their interests, we can assure them that our endeavors will not be relaxed, and that the increased facilities now in our hands will be used to the utmost for their benefit.

The circulation will be carefully divided among the leading farmers throughout the Dominion.

Prospectuses will be issued on the 15th July, and space can now be reserved.

Send for a Circular at once.

Premiums at Fairs.

In a large number of cases it is not the money value of the premium that gratifies the recipient. It is the fact that a premium was given at all. Now that fair prize lists are being—or should be—considered and published, we would suggest to those having the matter in charge, that a number of societies offer as premiums a year's subscription to the FARMER'S ADVOCATE AND HOME MAGAZINE. Those who have done this in a small way at first have found it so satisfactory that they have added to the number of premiums of this kind, and this custom is increasing. Such premiums do vastly more to promote the objects of the society than mere money prizes. Aside from the fact that one can not fail to be greatly benefited by the teaching of the FARMER'S ADVOCATE AND HOME MAGAZINE, its regular coming once a month is a frequent reminder of the society and its fair, and thus the interest of the recipient of the prize in the fair at which it was given is kept alive the whole year. If the officers who have yet to arrange their premium lists will think of this matter, they will see that they can in no other way make the money at their disposal go so far, and at the same time do as much good, as to award a large share of it in the manner suggested.

FAIRS FOR 1881.

Several announcements of Fairs with the prize lists have already come to hand. We would suggest to the different societies to fix your dates as early as possible and issue your prize list at once. Forward a copy of list to this office.

On the Wing.

AN EXPENSIVE DINNER.

On the morning of the 3rd of June we took a ticket for Toronto. At the station we enquired how many tickets had been sold for Port Stanley, the previous day. We were authoritatively informed two thousand. On the cars we met one of the Grange lecturers who informed us there were ten thousand people on the ground. Figures often differ, but Port Stanley is a favorite resort. It is now 15 years since we got up the first farmers' picnic that was held on that ground, and it has been kept up every year since under the name of either the farmers' or the Grange picnic. But we regret to state that it has in some respects been allowed to degenerate. At first all was harmony and peace, but latterly quarrels and fights have tended to mar the pleasures of the once peaceful gathering. No less than five arrests were made at this last meeting. We are pleased to report the arrests, as they must tend to check the ardor of those that disturb such gatherings. We deem it would be to the general good if heavy fines or imprisonment were more frequent when fights and quarrels arise at public gatherings. But what has this to do with an expensive dinner? Nothing; but we are on the road and conversation takes place and thought arises. Seated at the sumptuously-spread tables of the Queen's Hotel, Toronto—time 8.30 p.m. On each dinner napkin was pinned a neat little button-hole bouquet. These were for the guests. The dinner eaten, the speeches to, for and by the guest of the evening—Goldwin Smith—everything went off harmoniously. This, we presume, was one of the most important gatherings that has been held in Canada; it was got up by the Press Association. There were sixty members of the press there, many of whom had come a long distance. It consisted of the proprietors and representatives of all classes of the leading journals of Canada, and many communications of approval were read from those who could not attend. Mr. Goldwin Smith is a gentleman of high literary attainment and of independent thought. He has expressed his views in a very clear and plain manner, and there has been an attempt by a powerful Canadian paper to decry Mr. Smith and his views, and to "snuff him out." This dinner was got up to show Mr. Smith that the press of Canada desired and approved of open and free discussion, and disapproved any plans laid to check open discussion. A large number, perhaps the majority, did not endorse Mr. Smith's views, but all unanimously desired freer discussion and testified their respect to Mr. Smith. We were pleased to be at this gathering, and wish Mr. S. a pleasant sojourn in his native land, and also a safe return. Mr. Smith is looked upon as one of the most powerful writers we have in Canada—perhaps unequalled. It is rather strange that the powers of oratory and writing are seldom or hardly ever united in the same person. Had Mr.

Smith the oratorical powers of some of our 6th rate statesmen, we have no doubt he would be now holding a prominent position in our land. But the real facts are that the pen rules, and the most powerful orators have their thoughts molded by the writers, and thus deliver them to the mass.

While in Toronto we called at the office of the Agriculture and Arts Association, as we wished to know when the Executive Committee would meet and ascertain about the prizes to be given for farms in this locality, but we found the time for entry was now closed, and there were very few competitors. We think there is much room for improvement in regard to the awarding of this prize if it is to be continued, and if it is to be for the benefit of the farmer. There are real farmers and speculative farmers. We should be inclined to encourage the real farmer.

THE LATE SECRETARY.

In conversation with Mr. Drury, the chairman of the Finance Committee, we ascertained that the late Secretary, previous to his resignation being accepted, was compelled to give substantial bondsmen for the sum of two thousand dollars, to cover any losses to which the Association may be liable through his acts. We understand that already upwards of \$300 of liabilities are found out. These are for sums received by the Secretary and not accounted for. We asked the Chairman if he did not think they were doing wrong in accepting a resignation when the Secretary was criminally liable. The Chairman considered the security for the money would do more good to the Association than criminally prosecuting the Secretary. It is our opinion that this is an extremely injurious example for a Government body to set before the public. There might be some excuse for a person in the private walks of life abandoning prosecutions and compromising misdemeanors, etc., but even there the influences are very bad. The moral tone of society has been lowered by the easy way wrong-doers are allowed to escape.

SHORTHORN INFLUENCE.

Mr. Drury, the Chairman of the Finance Committee, censured us somewhat on our strictures in regard to Professor Brown's motion at last meeting. Mr. D. upheld Mr. Brown's views. We differed from him, and informed him we would show that Mr. B. was wrong in submitting the following motion:

"That, with the view of increasing the public interest in this Association, and reducing as much as possible the expense of the management thereof, as well as the desirability of securing a fuller representation in the Council of the leading breeders of live stock throughout the Province, and fewer of those whose interests can be sufficiently attended to by one person on the Board, the Legislature be petitioned to alter the constitution of the Association in such a way that the Mechanics' Institutes be represented by one person only, in place of three, and that no professors of agriculture as such be ex-officio members of the Council, and that two of the leading breeders of live stock be annually appointed by the Commissioner of Agriculture as members of the Council."

(Continued on Page 166)

Travelling Agents.

No one will pretend to deny the fact that travelling agents have done much good in facilitating business, in advancing progressive measures, and in educating the people. Good agents are generally well-informed, polished, and gentlemanly or lady-like personages. Their business has been to introduce improvements, such as railroads, etc.; also to introduce improved machinery and wares. Much good has been done by them. In fact, to such an extent has this travelling agency grown that it is almost useless to attempt to do business without it; but like all good institutions, corruptions creep in, and the whole mass of agents, good and bad, are too often condemned unjustly.

It appears to us that some check in some form should be put on those unprincipled men who are too often found travelling through the country under the name of agents. The check should properly come from the agents themselves, as they have Associations and rules and by-laws. They receive great privileges from the railroads and from hotels. In fact many hotels are principally supported by them. But whether the public should decry the travelling agency, and Legislature should interfere, is a matter for discussion and deliberation. Farmers have long complained about the swarms of this class of pests that continually bother them into purchases of goods they do not really require or something that is entirely useless. The old sheds and fence-corners testify to the glib-tongued agent's work. But there are worse tales than these. The paper has been signed for some patent right affair, and despite proofs of deception and fraud, all are of little avail. The farmer signed the paper, the note-shaver must have his money, and the duped farmer must pull-up stakes again, as that farm is gone sure. Can there be no certificate of veracity or utility? Should there not be a protection of some kind? Are there not too many of these travelling vendors? Are they of benefit or injury to the established business men in town or country? Are they too numerous or not? These thoughts are brought out from having a little conversation lately with two of our leading manufacturers. They say they are compelled to employ lots of agents because others do; they say the system is wrong, and that a change of some kind is required. The present system is injurious to the manufacturer and to the farmer, and the farmers have to pay so much extra for their implements. Many a farmer is left poor by the glib tongues of the agents, who always have something to sell that he could do without. Has any one a plan to suggest?

When in New Denmark, in New Brunswick, last year, we found that the whole settlement of these poor, industrious Danes had been foully duped. They, with laudable intentions, attempted to plant out fruit trees and raise orchards. The ready tongue of the agent, with his plate-books of fine fruit and fair promises, secured numerous orders; trees were delivered to the parties and carefully planted and watered, and watched for signs of life, but only a very few of them ever showed a bud. No doubt but the roots of these trees had been frozen before they were delivered. But who ever heard of a note being cancelled by an agent? The cash must come. Farmers are literally robbed of thousands of dollars every year by tree agents. Dead trees are often sold, and at high figures; good fruits are mingled with those of inferior quality; four times more than the real value is often paid, and sometimes four hundred times more. So persistent are some of these agents that "no" cannot be taken for an answer; they will stop a team, or even a machine, to

secure an order. Their cheeky, cunning, deceptive ways are past description. We have known hundreds of instances where their acts were nothing less than legal robbery. Thousands of farmers can corroborate these statements. In what way can we reach them? Would a tax be of benefit, or would a heavy guarantee for the honorable fulfilment of proper agreements be of any avail? In what way can we separate the sheep from the goats? Really good, honorable agents, who disseminate useful wares, are often of great benefit, and have to submit to abuses caused by the nefarious practices of the unprincipled ones. Not only is there danger from those travellers who sell goods that are worthless, but there has apparently been organized plans to dispose of really good wares, and then some other person claiming much more than the cost for a royalty afterwards. This has been the case with dairy goods, wire fencing, etc., etc. Perhaps fixed establishments should be the only places from which sales or orders should be taken—establishments that could give the Government or country ample security that fraud should not be practised. Perhaps some one may extend on these hints.

Township Exhibitions.

STRAWBERRY FESTIVAL.

The members of the Dorchester Township Agricultural Society, desiring to liquidate a debt on their Agricultural Hall, got up a strawberry festival on the 23rd of June. Mr. James Armstrong, the Warden of the County, occupied the chair. Mr. Weld was present, and in addressing the audience he asked for a vote from those who were in favor of retaining Township Exhibitions, and from those in favor of amalgamation with the county. Every one present favored the retention of the Township Exhibitions. After the vote had been taken Mr. Weld continued his remarks, which are embodied in the following:—

Agriculture is said to be the mother of nations. Let us look back to the time of our forefathers, and trace our history. Look at the fertile plains of Egypt and that once favored and blessed land Palestine. Perhaps there never existed, naturally, a finer or more fertile land than that of Turkey. Agriculture in the most prosperous days of Egypt, of Palestine, of Turkey, of Rome and of Greece was in a flourishing condition when these nations were respected; but the rod of the oppressors—or of the tax collectors, as we now call them—oppressed the farmers on these beautiful lands to such an extent that the last handful of seed and the last morsel of bread was forcibly yet legally taken from many of them, and and much of those once most favored of all lands now lies in utter desolation. No roads, no houses, not a vestige of a crop, not a live animal, is to be seen for miles and miles. The fact is, every other business preyed on agriculture and killed it, and the same result will attend all countries that do not protect the farmers. We must look at our own country. We doubt if there is any part of the world where better opportunities for farmers and men in general can be found than in Ontario at the present day. Wealth is evenly divided, poverty is unknown, and the farmers are now living in better style and enjoying more comforts than many kings have. Yet we find in this great and fine country, which we have but recently taken possession of, that already signs of oppression to farmers are beginning to be manifest; and the first and plainest manner in which you may be able to discern it has been the attempt to suppress or destroy the Township Exhibitions. You must have heard of the cry which has been raised,

namely, that these agricultural exhibitions are too numerous, take up too much time, &c., &c. Just enquire who are the parties that have raised this cry. Are they the plain country farmers, or are they agents or salesmen, or city or town men, or are they politicians? Is their policy selfishness, or is it for you? Ask any one of the advocates of abolishing Township Exhibitions why they do not begin right, if they mean what they say. Let them talk first of abolishing their day schools and their ministers, because there are so many schools or so many churches. Question: is there a better school than the Township Exhibition. We say no. Therefore let us express ourselves, and use our influence in every proper manner, and fight against this, one of the innovations on our rights. Let us have our hearts resolved and hands prepared the blessings we enjoy to guard.

The Township Agricultural Exhibition we look on as the most beneficial school held. Its advantages are increased to the highest pitch where the officers are most honorable. It is at these gatherings that the inhabitants are brought together for one united and beneficial purpose, to which no one can object. The exchange of thoughts, the opening of fresh ideas, viewing the products of the season's crops, and the handywork of the artisan, all tend to call forth remarks or awaken thought in those who are daily toiling at their regular avocations. The youth of our country have thus learned most important beneficial lessons. This is where the germs of stimulation and progress are imbibed, and a strong desire to improve, to compete and to surpass is often implanted in the little boy or girl, not yet in their teens. Even the grey-headed often leave with a determination to improve.

We believe we are doing our duty in attempting to maintain and improve our Township Exhibitions. The officers of these exhibitions deserve much more of your thanks and gratitude than they generally receive; they devote much valuable time and even their money in the endeavor to make your exhibitions attractive; their only pay is often your gratitude or your thanks. Every one should try to aid the township officers in their laudable undertaking, not only with the voice of praise, but with something more tangible. The cost of membership is but one dollar, yet how often do we find some old miser, perhaps owning 400 or 500 acres, who will not subscribe one cent, and in whose opinion \$1 is too much for a Township Exhibition. There are some few so parsimonious that they will not give as they ought to such an improving school, which must tend to increase the value of their property. We should like to see greater power given to the directors of these exhibitions and to the Township Councils to enable them to collect part of the funds from those who do not voluntarily subscribe or aid the exhibitions.

It is our impression that the whole plan of selecting or appointing members to represent the agriculturists should be changed. As it now stands, any person can, with a little money or a little influence, be elected. So little intellectual information has been imparted at any of the meetings held for the election of the officers, that very few farmers care about wasting a day to attend, and would rather leave the labor of preparing for the exhibition to others. In fact, the election of officers in this county have merely been a rush for about one hour. Agricultural discussions have not occupied the attention of the members as much as they should have done, and to this fact may be attributed the apathy of farmers concerning the meetings; consequently a very few

members have the power of voting away the Township Exhibitions. We believe that this power should be so limited that no Township Agricultural Society be legally discontinued unless a petition to that effect be signed by a majority of the farmers of the township who occupy twenty-five acres of land and upwards.

There may be some counties that are so compact, that the inhabitants can reach the county exhibition with ease. In such instances there may be no advantage in maintaining the Township Exhibitions.

English Letter, No. 27.

[FROM OUR OWN CORRESPONDENT.]

Liverpool, June 16.

There is every promise now of a plentiful fruit year, and hay and corn are also doing well. This ought to speak well for the British farmers; but their decline really seems now to be chronic, and I doubt whether even a series of plentiful years can put them on their legs again, unless, indeed, there be short crops and disasters over nearly the whole of the rest of the world, which none of us, of course, can wish for. The shoe is pinching not only the farmers, but the landowners, who, if they are to keep their land occupied at all, are compelled to reduce their rents in a very substantial degree. In countries especially where there are heavy lands, and including unoccupied farms, the actual reductions compared with some six or seven years ago, are as high as 50, and in some cases 70 per cent. In other words the landlord whose income from land five years ago was £5,000 a year, finds himself now receiving only £2,000 or £2,500, and if he be in the unhappy position of having a heavy mortgage to face, his position is not to be envied. Neither is our general trade reviving in at all the degree that was expected, and in my humble judgment our policy of Free Trade will ere long have to run the gauntlet of a very keen discussion, and I, for one, doubt very much whether it will survive it. The feeling against one-sided Free Trade as it exists at present, is becoming very wide spread and very emphatic; the working classes are awakening to the fact that a low priced loaf is not necessarily a cheap one, and that if protection to our farmers and to our leading industries mean more work and higher wages, they will gladly pay a little more for their food. A man earning ten dollars a week is far more able to pay 20 cents a loaf for his bread than the man who earns 5 dollars a week is able to pay 10. This is really the axle upon which the whole question turns. In my humble view, a proper, patriotic, and in every way sensible solution of the difficulty would be a commercial federation between this country and its colonies. Ours is the finest market in the world as you well know, and I feel persuaded that in order to obtain a substantial advantage over the States and other competitors, such, for instance, as would be gained by our taxing American food supplies with a 20 per cent import duty, whilst yours had free access; your government would be glad to find ways and means for placing our manufacturers on an equally favorable footing in your markets. That a change of some kind must, ere long, be brought about I am absolutely convinced, and I should like it to take the form I have briefly indicated.

The fearful disaster which befel your city and district recently, caused immense excitement, sympathy and indignation here. The lists of the drowned were eagerly scanned, for probably no part of the Dominion has more direct ties with the old country than your own. There seems little

doubt that there has been gross mismanagement somewhere.

Emigration, which has been very brisk during the spring, shows some little sign of abatement. However, an enormous number of agricultural labourers and domestic servants from Ireland are leaving for the United States. I am informed by an agent of a steamboat company here that fully 75 per cent. of the passages of these Irish Roman Catholics are being paid for by their friends in the United States. Consequently it is nothing but natural that the emigration of this class should flow in that direction.

There is nothing of special moment to notice this month in connection with any of the live stock trades. The first shipments of Canadian cattle have arrived in good condition, and are realizing fairly remunerative prices. I am sorry to say, however, that the dead meat trade of New Brunswick does not appear to be properly managed, where the hitch is, I cannot say, but I am informed that the first two or three consignments have been disposed of at prices which must result in enormous losses. It may be remembered that since the initiation of the enormous trade in dead meat we have not experienced here a very hot summer. But from present appearances we may have both a long and very hot one, and in that case the dead meat market, which is already clogged by the compulsory slaughter of States cattle at the ports of debarkation here, will be in a bad way. This, however, so long as our Canadian cattle retain a clean bill of health, must be entirely to their advantage, as country butchers can take their purchases home and kill them as required.

Sir John A. Macdonald, your Premier, has arrived safely, and it is to be hoped that the change of air and scene, and absence from the effects of the "N. P.," will soon restore his health. I am sorry, however, to say that he looked far from well on his arrival here.

The acquisition of pedigree and other first-class stock by the agents of Canadian and States breeders actively continues. The S. S. Quebec, which sailed on Saturday last, took out a general consignment. Your townsman, Mr. R. Gibson, of Ilderton, Ont., was a passenger by this steamer, and took out, as may readily be imagined, one of the finest little lots of Shorthorns ever exported from this country. The lot includes the following: 1. Rowfant Duke of Oxford 2nd; 2. Rowfant Kirklevington 3rd; 3. A red and white bull calf; 4. Oxford Duke of Tregunter, roan; 5. Viscountess Barrington 2nd; 6. Grand Duchess Barrington 4th; 7. Duchess Wild Eyes; 8. Haverling Waterloo 3rd. Mr. Gibson has also purchased for Mr. Murray, of Chesterfield, Ontario, the following: 1. Waterloo Duchess, red and white, calved June 9th, 1874, and, 2, her bull calf; 3. Miss Wild Eyes, roan, calved June 10th, 1879; 4. and a red and white Barrington bull, bred by the Duke of Devonshire. Mr. Gibson's many friends in your district will, I am sure, be glad to hear of the safe arrival of himself and valuable stock.

Mr. C. C. Bridges, of Barrie, Ont., whose favour seems to lie in the direction of the white faces, has taken out a very fine draft of Herefords, comprising a two year old heifer (Mary), a bull calf (Corporal), a heifer (Violet) and two yearling heifers (Blossom and Moss Rose). Most of these were purchased at high figures from Mr. Grasset, a relative of Dean Grasset, of Toronto. Mr. Bridges also took out twenty very prime Shropshire ewes from some of the most celebrated flocks in the country.

Mr. McCrae, of Guelph, took out by the same steamer a selection of Polled Galloway cattle. Although these are very nice ones, your readers

will readily distinguish between them and the Polled Aberdeens, at your shows in the fall. Unfortunately there appears to be a prejudice against polled cattle generally in Canada, owing to the poor character of the Polled Galloways which have hitherto been exhibited in the Dominion. Mr. Simon Beattie has sent out to Quebec a very valuable draft of Jersey cattle. One cow is stated by competent judges to be the finest specimen of that breed in existence. After passing through quarantine, I understand they are to appear at your Western show. Mr. Beattie has also sent out a very fine bull and four heifers, selected from the best Polled Aberdeen herds in Scotland. I cannot speak too highly of this breed, which has been enormously improved during the last few years.

Messrs. Gudgett & Simpson, breeders and cattle ranchmen of Missouri and Colorado, have recently been visiting the best polled herds in the north and have succeeded in purchasing 38 head, giving as much as 70 guineas for some of them. The white faces are also making great head in public favor; very large purchases have been made for different breeders in the States, and I heard that the whole of the space of a steamer which is to sail shortly has been chartered for the conveyance of some 400 head of Herefords. I also notice that "Bell's Weekly Messenger," the oldest agricultural journal, which has for nearly 20 years made Shorthorn intelligence a feature of the paper, is now announcing that it will give weekly prominence to notes on Herefords, from the pen of Mr. Wm. Housman, probably one of the best authorities on horned stock in the world. This information may not be very pleasing to those who are so devoted to Shorthorns; but there is room for all, and any that will improve the native breeds should be equally welcome amongst you.

Meeting of the New Brunswick Board of Agriculture.

The members of the New Brunswick Board of Agriculture met in special session, the Hon. Mr. Wedderburn, the President of the Board, presiding. The object of the meeting was to confer with the Government with regard to the importation of stock and the procuring of a stock farm.

The Board proceeded to the consideration of the returns of several Agricultural Societies before entertaining the special business of the meeting.

The report from the committee that had been appointed to procure information with regard to the establishment of a stock farm, stated that Stanbury, York, St. John and Kings counties offered good sites for such a farm. The consideration of the report was postponed till the conference with the Government.

A motion that in the opinion of the Board it is desirable that a stock farm be established in the Province, was unanimously adopted. As was, also, a motion that a stock farm should be purchased in preference to being leased.

It was further resolved that the stock be purchased by a resident agent in Great Britain, and that the stock when imported be quarantined and sold at St. John.

It was agreed that the importation of stock be made with as little delay as possible, and the Secretary of the Board to visit such of the Societies as he would think proper. At a subsequent meeting of the Board with the Government the importation of stock and the establishment of a stock farm were fully discussed, with the result that the Government and Board are in accord in these matters, and the importation will be proceeded with without delay; efforts are to be made to secure a suitable tract for a stock farm.

On the Wing.*Continued from Page 158.*

That part of the motion that treats of reducing the Board is very desirable, and might be beneficially entertained, but while making a slight reduction, it also makes a change, and that change a very dangerous one, and perhaps not honorable. Professor Buckland was the gentleman who devoted his own time and money to establish the first Provincial Exhibition. He was an active member so long as it was carried on satisfactorily, but although a member still he has done but little for it for many years. The facts are that he has been overworked, and is now a very old gentleman and deserves better treatment than he is receiving. Yet this honorable gentleman is to be ignominiously kicked out without thanks or reward, and if any one in Canada deserves consideration it is the old Professor. Next Mr. Brown's motion provides for the appointment of two additional stock breeders. We are willing to give every just credit to the breeders, but why they should be placed above all others is a query to us. The fact is that the stock raisers are perfectly capable of looking after themselves without special powers. Especially at this time is their presence on the Board unnecessary. The Shorthorn men are now about to form an association, and take control of the Herd Book, and other classes of stock must have their respective records conducted by the breeders before they will be of any value.

The Association should be composed of men who have broad and generous views, men of honor and stability. Such men, if elected, would not unduly favor Shorthorn or other expenditures to favor any special breed, although they might be extensive breeder.

The Future of Our Public Agricultural Expenditures.

We deem it our duty again to inform you from good authority that there existed a very strong desire among the members of our Local Legislature at its last session, to abandon many of the grants intended for the encouragement of agriculture. So strong has this feeling grown that we are again informed of the fact. It appears to us that the great and sweeping changes that have previously taken place have been too hurriedly enacted, and that it would serve the interests of this Dominion if discussions on contemplated changes should take place previous to the assembling of Parliament, and reasons for and against should be ventilated. Often party or personal influences are brought to bear too strongly when dealing with these subjects. In reality, all party interests should and must be buried on such occasions if the best results are to be obtained. A very slight examination into the past would tend to aid the maturing of improvements in future arrangements.

There are many who contemplate the withholding of the grant to the Model Farm or School of Agriculture; also many who contemplate the withholding of the grant to the Provincial Association. A desire is evinced by some to suppress Township Exhibitions, and some talk of cutting off the grants to special objects, such as the Fruit Growers' Association, Dairymen's Association, Veterinary College, etc., etc.

And yet there is a desire among many to advance the interests of agriculture if any improved plans can be shown. There are many among our readers who can look on the present state of affairs from an unprejudiced standpoint. We have previously treated on many important subjects, but there is such a very strong party feeling existing that some condemn us as a Grit, and others as

a Tory, this has existed for the past fifteen years. We now wish to enlist others to discuss this important question, and purpose to offer a prize of \$20 for the best essay on the subject of "Our Future Public Agricultural Expenditure," the article to be in this office by the 15th August. As the subject is an important one, it may require more space than has been usually allowed, therefore we will limit it to two pages. The writer's name to appear, or otherwise, as he may request.

Opposition is the Life of Trade.

This old quaint remark appears to be verified in a novel form. Many interested in and near Toronto, have for some time past used their influence to centre the expenditure of public agricultural money in Toronto, or rather to fix the permanency of the Provincial Exhibition in that city. The Grange influence at the Provincial has passed a resolution intending to encourage the assembly of Grangers from all parts in London during the holding of the Provincial Exhibition the coming autumn. The Industrial Exhibition of Toronto surpasses the bare resolution of the Provincial Board by actually allowing a commission to the Grangers for all they can induce to attend there on a certain day. If the Provincial Association do not think they give a plain farmer full value for his 25c. they might reduce the price of the tickets to 22½c. or 20c. to those applying for reduction; and why should not citizens be as much entitled to a reduction as farmers.

Quebec Legislative Grants to Encourage Agriculture.

The Board of Agriculture, Arts and Manufactures of the Province of Quebec was granted \$10,000; \$50,000 were granted to Agricultural Societies; \$2,450 for Agricultural Colleges; \$7,000 for the publishing of agricultural information; \$1,500 were granted for the encouragement of dairying. A competent instructor is to be engaged to furnish information on the means of improving the quality of the butter and cheese now manufactured. \$10,000 were also granted toward the establishment of permanent exhibition buildings in Montreal, making a total of \$80,950 granted for the encouragement of agriculture in the Province of Quebec.

The Government has imported and distributed among the Agricultural Societies 500 tons of phosphates, each Society getting two tons, for which they were charged \$26 per ton. This being the first attempt to introduce fertilizers among the farmers, it was thought by some that it should have been given free of cost by the Government. Many of the Societies, thinking they are compelled to take it whether they wish to or not, do not receive it with favor. Such, however, is not the case. No Society need accept it unless they desire it; but it is very desirable that all Societies which are convenient to any railway station or harbor should experiment with it. But there are some Societies so situated that the accepting of it would be a loss to them. Being situated upwards of sixty miles from any station, the first cost and the cost of hauling such a distance would make it far too costly an article to be of any profit. It appears, too, that this article has been otherwise mismanaged, not having been distributed until too late in the season to be of much if any value. The Council of the Board of Agriculture, Arts and Manufactures seems to be a cause of complaint in Quebec as well as in Ontario. It is complained that they are principally theorists, and although some good men are among them, they are all Government nominees. This is, in our opinion, a decided objection. Greater advances would be

made by the agriculturists if they were allowed to elect the members of this Board. The ordinary farmers would take a greater interest in the exhibitions and the doings of the Board if they were allowed a voice in the government of it, but as it now exists many look on it as they do on the Government—a thing not to be meddled with, and beyond their ability to comprehend; therefore they do not take the interest in it they otherwise would, and of course receive a corresponding benefit. We find the Agricultural Colleges are also in disfavor. The Hon. Messrs. Langelier and Chapleau said "they regretted there were so little results to be seen from these schools; the habitants seem to think them of no value, but say they are an injury." The amount of money granted to them is very small, but should produce some good results.

When the item of \$1,500 was granted for the encouragement of the dairy interests of the Province, Hon. Messrs. Ross and Irving ridiculed the idea of there being any necessity for instructing the people of Quebec in the art of dairying. In the Province of Ontario there are \$3,000 expended for this purpose yearly. There are two regularly established Dairymen's Associations, each of which receive \$1,500, which is expended partly in prizes, partly in publishing their yearly report, and in engaging a number of skilled professors and instructors to lecture to and instruct the Ontario farmers in this very important art. And we have been assured by prominent and very reliable authorities on the subject that all the money expended has returned 200 per cent. for all outlay, and that the dairy products of this Province have improved in quality to a truly wonderful extent. The experience of European countries is similar to ours, and though they produce a better article than the American product, they find it profitable to engage skilled professors as instructors, and they even establish dairy schools. Either the above members are ignorant of the importance of the subject, or else they are very reckless of the farmers' and their country's interests in thus opposing this important grant, and should, when opportunity offers, be brought severely to task for the same.

Hon. Mr. Chapleau said there were 1,000,000 milch cows in the Province, which produced 33,000,000 pounds of butter annually; and from market quotations it was shown that this was sold at 12 to 18 cents per pound less than that produced by several European countries, and on the product sold there was a loss to the Province of at least \$100,000.

Potato Starch Factories.

The subject of potato starch manufacturing in Canada has led to a volume of enquiries and correspondence on the subject, and will, we hope, lead to the development of another of the hitherto neglected resources of our country. From our correspondent at Woodstock, N. B., we have had several letters of enquiry on the subject, and from Mr. Eastwood, of Manchester, England, we have received some very valuable information—analyses of potatoes, and statistics pertaining thereto.

A starch factory in N. B. would be a great acquisition to farmers, giving them a ready market for all their surplus potatoes that they have been glad to get purchasers for at 20 cents per bushel. A Maine correspondent of Mr. Eastwood says a bushel of potatoes will make 9 lbs of starch; three cents per lb. value by the cask, which would be about 600 lbs. The water from which the starch has been obtained is used for the purpose of irrigation, and the pulp from which half of the water has been compressed is used for food for cows and

sheep. The starch, therefore, though the principal, is not the only ingredient of value.

The season for making starch is from September to April, say eight months, and the product of starch for these eight months appears to be 16 per cent. The quantity of starch not only differs in different varieties of potatoes, but also the nature of the soil, the mode of culture, as well as the season of the year. May, June, July and August appear worthless for making farina.

From Mr. Eastwood's communication we take the following extracts:

The potato is largely used in making starch, especially in France. This valuable tuber has frequently been the subject of chemical analysis. The following is an analysis of a red potato richer in starch than some other varieties, which usually contain from 5 to 8 or 9 per cent. of starchy fibre and only 9 to 15 or 18 per cent. of starch.

Starch and starchy fibre.....	30.469
Albumen, gluten, fat, gum, etc.....	.697
Phosphate of potash, silicates, soda, lime, &c.....	.815
Chloral of potassum, 176; free citric acid, 47.....	.223
Water.....	66.875

The produce of a crop of potatoes varies from 30 to 100 large bolls per acre. The price in Scotland does not vary so much—from 4s. to 6s. per boll being the extreme limits between cheap and dear prices. Taking 60 bolls as the medium produce and 5s. as the medium price, the gross return from an imperial acre is £15. A boll is 20 stones of 14 lbs to the stone. The average produce of an acre 16,800 lbs., or 280 bush. [An average three times that of the U. S. of America.]

In reply to enquiries relative to starch factories, Mr. Eastwood says of farina machinery: The best German machines are very elaborate and expensive. One to produce 30cwt of starch, say 3360 lbs., and grinding 10 tons (2240 lbs.) potatoes in twelve hours, would cost £611 10s 4d. This is the machine with sieves, grates, &c., complete, but not fixed, and without any driving power. The engine, boiler, valves, &c., would cost about £421 8s. 9d. I would think a site would be chosen where water would be available, which would be much more economical if properly gone about; and I think a much simpler machine may be constructed than the above by a Canadian or American.

How many lbs. of starch are made from a barrel of potatoes? (Bbl. weighs 180 lbs.) This depends upon the sort of potato grown. The quantity of starch (dry starch) is from 8 to 15 per cent. It is said that 60 lbs. potatoes will produce 9 lbs. starch, containing 15 per cent of moisture, which, as it is now sold, would command £16 per ton here. It can be sold here to the makers of British gum, who buy 500 tons at once. Small and middle-sized potatoes make more starch than large ones do.

Shorthorn Breeders' Association.

A large number of the prominent Shorthorn breeders of Ontario met at the Walker House, Toronto, June 5th. Their object was to form a Shorthorn Breeders' Association and take charge of the Herd Book. Mr. Dryden, M. P. P., of Brooklin, Ont., briefly addressed the meeting, pointing out the desirability of having an association composed of the breeders of Shorthorn cattle. One point strongly to be recommended for their adoption was that of a registration for Shorthorns outside of the Herd Book at present in the hands of the Agricultural and Arts Association. The book they had at present was of no value outside of Canada, and had no standing in the United States. There were even in Canada a number of breeders who did not recognize it. He thought it was now a necessity for the Shorthorn breeders to have a reliable record, and one that would be accepted in the United States. For this purpose it was necessary for the Shorthorn breeders to form an Association, and he would therefore move, seconded by Mr. Cowan, "1. That this meeting fully endorse the action taken in calling the breeders of Shorthorns together with a view of effecting an organization of the same. 2. That the object of such organization should be

the perpetuation of the Shorthorn cattle in their original purity. 3. In order to carry out the above it is advisable that the Association should superintend their registration, and that if possible the record should be published annually. 4. That in order to guard and perpetuate the purity of the blood of Shorthorn cattle, and to give the 'Herd Book' thus published a proper standing, it is desirable that the standard of entry should be fixed so as to be at least equal to that of the English or American 'Herd Books.'"

Mr. Dryden observed, before the motion was put to the meeting, that there had been long delays in getting out the Association Herd Book.

The above resolutions, after some debate, were passed. All present seemed to be of one mind concerning them. Each member recognized the fact that the present record, as conducted by the Board of Agriculture and Arts, was not meeting the requirements of the breeders or farmers, either in the way it is conducted or the standard at which it admits animals. Breeders all over the Province seem to recognize these facts.

The Secretary of the meeting, Mr. J. C. Snell, of Edmonton, Ont., read letters from several prominent gentlemen who were unable to attend, but who said they gave their hearty support to the present movement.

When the subject of fixing a standard was brought up for discussion, it was resolved that the standard for entry should be no lower than that of the English or American Herd Books, but this being a preliminary meeting, and considering the importance of the work, it was decided to choose a committee of well-known breeders to draft a constitution and by-laws, the same to be presented to the next general meeting of breeders for their approval.

It was moved by Mr. Gordon, seconded by Mr. Dryden, "That the names hereunder be a Committee to draft a constitution and by-laws for the Shorthorn Breeders' Association, and that the same be printed and circulated among Shorthorn breeders previous to the next meeting:—John Dryden, M. P. P.; Hon. H. M. Cochrane, Compton, Que.; W. Whitlaw, Guelph; J. I. Davidson, Balsam; John Clay, Brantford; John Millar, Brougham; Richard Gibson, Ilderton; James Hunter, Alma; J. C. Snell, Edmonton; J. L. Cowan, Galt; A. R. Gordon, Cooksville; W. G. Pettit, Burlington; S. White, M. P. P., Windsor." Carried.

Mr. Gordon moved, seconded by Mr. Green, "That it be an instruction to the Committee appointed this day to treat with the Agricultural and Arts Association as to giving the control of the Shorthorn Herd Book to this Association, and to report fully to the next meeting; also to prepare a standard to govern the recording of cattle in the proposed herd-book." Carried.

The general opinion of the meeting was that it would be unwise to have two herd-books. It was also resolved that five members of the Committee chosen to draft a constitution form a quorum.

Before the meeting adjourned, Mr. Whitlaw, of Guelph, said "he wished the meeting to take notice of the regulations requiring cattle-breeders to keep their stock at the Provincial and Toronto Exhibitions for nearly two weeks. He thought one week on exhibition should be considered quite sufficient. It was a heavy expense for exhibitors to remain for so many days with their stock."

Many of those present coincided with Mr. Whitlaw. The meeting then adjourned.

After the adjournment of the general meeting, the Committee appointed for the purpose of drafting a constitution and by-laws had a brief preliminary meeting. Mr. Dryden was moved to the chair and Mr. J. C. Snell appointed secretary.

After some discussion, it was decided that Messrs. Gordon, Snell and Dryden should be a sub-committee to draft the constitution and submit it to a meeting of the whole Committee to be held subject to their call, as early as possible in the present month. The Committee then adjourned.

We are very much pleased with this effort on the part of the Canadian breeders to form a Shorthorn Breeders' Association and take charge of the record. The ADVOCATE has set forth the desirability of this step for some years. We need not tell our readers our reasons; all must be fully acquainted with them. It would have been better for the Shorthorn interest and for the country at large, if this Association had been formed years ago. Now that it is formed, it deserves the hearty co-operation of every Shorthorn breeder and farmer in the Province. All who have any interest in this variety of stock should by all means attend the next general meeting, which

will be held in Toronto as soon as the Committee have arranged suitable constitution and by-laws, notice of which will be given in due time. We were pleased with the tone of the last meeting. Those present seemed desirous of promoting the Shorthorn interest, even at a loss to themselves; all the transactions which took place were actuated by honorable principles. From what we know of those who are promoting it, we have strong hopes of the usefulness of this new society. The appointing of a recording secretary will be of the greatest importance. A strictly honorable man, who will energetically push the work, one who thoroughly understands the business allotted to him, should be secured. Mr. R. L. Denison, of Toronto, has claims on the breeders of the Province, having for the past twelve years been a faithful servant.

Prospects for Grain Growing in the Northwest.

The distance of Manitoba and the Northwest Territories from the seaboard has long retarded emigration to that country and its agricultural progress. Abundant crops of wheat could be grown, but there was no market for it, and consequently the land, inferior in fertility to none in the Old World or the New, has remained a hunting ground for Indians and half-breeds. There will now be quite a revolution in these matters. The freight of wheat from Winnipeg to Liverpool is calculated to be only 24c. per bushel, and this calculation is from high authority. The opinion of Capt. Murray, who is thoroughly acquainted with the question of transportation, says that when the railroad from Winnipeg to Fort William is completed the volume of exports will be much larger than we have any conception of, and vessels will be extensively engaged in carrying grain from that point to Montreal or Quebec, and the very fact that cheap transportation will thus be provided, will be an inducement for people to settle in the Northwest. The cost would stand thus:—Rail carriage from Winnipeg to Prince Arthur's Landing, estimated at 8c.; water carriage from Prince Arthur's Landing to Montreal, 5 cents; Montreal to Liverpool, 11c.—total, 24c. per bushel. Now wheat in Winnipeg is worth from 60c. to 70c.; the cost of shipment as above would be 24c., making the total cost of wheat 95c.

The Future of Barley.

I believe that a really temperate climate is best for the growth of barley, and there are few regions in America that can be called thoroughly temperate. I understand that some of the Western plains of the Rocky Mountains, towards the Pacific, and in the territories of Washington and Oregon, there may be districts which produce barley of very beautiful quality; and you know very well that Californian barley is highly prized in this country, although I have been informed on the best possible authority that the extract the brewer derives from it does not answer his expectations. Still the region in which this Californian barley is grown is comparatively small. Taking the vast area of the United States, I could see hardly any good samples of barley at all. This brings me to the question: What is the repeal of the malt tax going to do for us? In America, where they have a beer tax, they find there is nothing so cheap or good for the manufacture of beer as barley and hops. I believe that will be the result here; why should it not be so? If in America they have been trying all sorts of experiments—and you know what a cute and clever people they are—if there was a possibility of manufacturing a good description of beer from maize or sugar or anything else, they would do it. But they do not. They simply take barley—which, mind you, is very inferior to ours—and in the manufacture never adulterate it with sugar; and as to this question of adulteration, Mr. Gladstone said in all probability we should make beer from potatoes. I hope and believe that the same thing will follow here. There is also this extraordinary fact. They prefer the Canadian barley, which is grown in a temperate climate, to their own barley and they pay an import duty of 7½d. per bushel; whereas in a good many districts they could buy maize if that was an article from which they could extract beer at 1s. 6d per bushel.—C. S. READ, [one of the Royal Commissioners upon Agriculture, and formerly M. P. for South Norfolk, England.]

Dairy.**Points Noted in the Manufacture of Best Butter.**

BY PROF. L. E. ARNOLD.

The best samples of butter I have ever seen were made in private dairies where only a few cows were kept. These samples have not been the result of accident. They have, in all cases, come from skill and judgment in adapting means to ends. The food employed has been grass and grain or some of its products. The cows have been well selected for the richness of milk, and for high flavor and color in its butter elements. The best butter never comes from cows that secrete low flavored milk, stearine instead of flavoring oils. Where the best butter is made, the cows are all in good health and well supplied with fresh water, as well as with good food. No matter how good the normal quality of milk, thirst and starvation will spoil it for prime butter. It has also been noted that the cows have been gently treated. They are never hurried to or from the yard by dogs, or clubbed or stoned or harshly treated at milking or any other time. They are provided with shade, and protected against the annoyance of flies, and against the inclemencies of weather of every kind; in other words there has been a steady care to secure for them comfort and quiet. Then the milking has been regular, and the spaces of time between milkings equal; much depends on this. Milking at 4 o'clock in the morning and 8 at night never makes the finest butter or cheese. Sixteen hours, or an approximation to it, are too long a time for the milk to remain in the udder, for the good of the milk or of the cows, especially when the flow is large. By crowding and straining the bag it becomes painful and feverish, and the butter fats, as well as other elements of milk, become altered in consequence. There is nothing like a sound and healthy udder, free from all feverishness, congestion and swelling, for secreting good milk. After milk has been once secreted it continues to suffer from change and absorption, so long as it remains in the bag. It would be better to milk three times a day than to make a long space between milkings. It is hardly necessary to say that wherever the finest butter is made, the milking is done in the most cleanly manner. It is so neatly done that straining is of very little use; it might even be dispensed with, but for the occasional dropping of a stray hair. Whoever places much dependence on the strainer for securing clean milk, will never make gilt edged butter. Allowing dirt to get into the milk, and then depending on the strainer to get it out, is a poor apology for cleanliness. More or less of the dirt, especially everything of a soluble nature, and some that is not, is sure to find its way through the meshes of the strainer with the crowding current of milk. The practice of using one cow's milk to wash the filth collected from another cow's milk, as is frequently done by continuing to strain mess after mess through the same strainer without cleaning, does not contribute anything toward gilt edged butter, and is not allowed where the best butter is made. Then the tin pails (for I noticed wooden pails are not used where I find the best butter) and all the vessels used for handling or setting milk, are kept scrupulously clean. When used they are not left for the milk, and particularly the milk sugar, to dry and form a gummy coating to serve as a reservoir for infection, and which it is difficult to get off. They are attended to promptly, rinsed in cold water, washed in warm, and scalded in water actually boiling hot, and, to avoid contamination from a sour dish cloth, are left to drain and dry without wiping. They are

kept bright by scouring with salt, and as a protection against greasy and infectious matter, sal soda is employed instead of soft soap, which, though it may possibly be clean, is generally too filthy to be used about milk vessels, to say nothing of the injury it does to tin ware from the potash it contains.

Another peculiarity noticed in the manufacture of the finest samples of butter I have met with, is that the milk when set for the cream to rise has been spread out pretty thin in temperate air which is free from foreign odors, currents, and unusual dampness. I have met with plenty of fine, and even fancy, butter made by various modes of deep and cold setting; but the most exquisite flavor has come from an exposure of the cream to pure air, at about 60° for 30 to 40 hours, while rising on milk spread out 2½ to 3 inches deep. By such an exposure the butter fats acquire a new and delicious flavor, which does not exist in the milk when it comes from the cows, and which I have not found developed in any other way.

Early skimming and churning are also essential to the best butter. They must be done while there is a fresh and new taste to the cream, and before anything of a stale condition has been reached. The churning is best done when the milk is thus set right away after skimming. It should not be delayed beyond the first stage of acidity, and is better done just before acidity is perceptible. The mode of churning is also important. The force of the churn must at every impulse operate on all the cream at once and equally, as with a thud or concussion. The butter is always unfavorably affected by friction, and unequal action; it becomes greasy and salvy and low flavored. In these respects as much depends on working as on churning. The more working the poorer the butter. Gathering it in a mass in the churn is sure to detract something from quality, because the working which will be necessary to get the buttermilk out, will break the grain more or less, and thus lower its merits. In dairies where the best butter is made, little or no working is done. It is avoided by gathering the butter in granules, by chilling and slow churning when it is about ready to gather. It can then, without any working, be freed from buttermilk by washing in cold brine, with benefit instead of injury to the butter. These and various other items which contribute to the highest excellence, can be more easily secured in a small private dairy than in a creamery. Where the milk is gathered from 20 or 30 patrons it would be very difficult to find everything just right. It could hardly be expected. Somebody's cows would be sick, or give poor milk, or get stagnant water or perhaps not enough of any kind, or be worried too much with dogs or annoyed with flies. Somebody may not milk cleanly, or keep his pails and cans in order, or neglect something which he ought to do, or do something he ought not to do. It would be almost impossible to get everything just right in the milk where so many are concerned in its collection, and hence perfection would not be so likely to occur, as in a small dairy where all the necessary conditions would be more easily controlled. But creameries have their points of peculiarity and importance, which, though not likely to give the acme of perfection, may still be superior in general results. But their consideration must be left for another occasion.

The Manufacture of Butter.

BY W. T. CARRINGTON, ENGLAND.

In describing shortly the details of successful butter-making, we will first mention a few of the causes of inferior quality—(1) a want of cleanliness in dealing with the milk, and of suitable dairy rooms for setting the milk well-ventilated and free from any strong odours; (2) leaving the cream so long on the milk that it becomes sour; (3) not churning often enough, churning at wrong temperatures, or too fast, and not stopping soon enough when the butter begins to come; (4) not getting out all the buttermilk, or leaving too much water mixed with the butter; (5) over salting or using imperfectly mixed coarse and inferior salt; (6) working the butter with the hands; (7) want of

tidiness in preparing and sending it to market; (8) feeding cows on turnips or other strong flavoured food, or giving them foul water or injudicious driving of the cows before milking.

There are two distinct systems of setting milk, each of which has its advocates. The one the setting of milk in shallow pans in dairy rooms of the temperature of from 50° to 60°; the other the deep setting of milk at a low temperature of about 40°, obtained by the use of ice or very cold spring water. The latter system finds much favour in the North of Europe, and also in America, varieties of it being known by the name of the "Swartz," the "Cooley," and the "Hardin" systems. The chief advantage of these systems is that the milk is kept sweet, pure, and excellent keeping butter, free from casein, and therefore not likely to taint, is produced.

Where butter is made for sale, whilst fresh, an equally good result may be obtained on the shallow setting system, and as supplies of ice or water sufficiently cold are frequently unattainable here, we do not think the system is likely to become general. It is found that cream rises best when the temperature of the milk is falling somewhat rapidly, and though this separation takes place under the cold setting system, the cream obtained is thinner and less concentrated than that obtained by shallow setting.

A comparatively recent invention is the centrifugal cream separator (Laval's), by which cream can be almost perfectly separated immediately after milking. This plan, however, requires the application of power, and is scarcely likely to become general, except in creameries or very large dairies. One advantage of the system is that the skim milk is obtained perfectly fresh and suitable for sale wherever there is a demand for it. Excellent pure flavoured butter is obtained from the cream resulting from this use of the separator. It is usefully employed in some of the large London dairy establishments.

We will now describe the shallow setting of milk. The milk, when brought from the cow, is carefully strained and put in shallow pans, from 2 to 4 inches deep, made of well-tinned iron, glazed earthenware, or glass, all materials which are not porous, and can be kept perfectly sweet by the use of hot water. The pans are set in a dairy the temperature of which in winter should not sink much below 50°, and in summer should be kept as cool as may be. The room should be well ventilated, and no strong odours of meat, vegetables, or smell from drains, should be permitted. The cream should be carefully skimmed off at twenty-four hours, and the milk be used for feeding pigs or rearing calves, for either purpose having considerable value when suitably mixed with meal. Some farmers churn all the milk without setting for cream. This plan has, however, nothing to recommend it. If churned sweet it is a wasteful plan, and all the butter is not obtained, whilst if, as is usually the case, it is lapped or soured before churning, the quality of the butter is sacrificed, there being a considerable mixture of curd in the butter. The purest butter is made from perfectly sweet cream, but many makers prefer the cream taken off sweet milk, but slightly soured before churning, and thus obtain excellent butter. Cream when put in the churn should be of the temperature of about 60°, or a little lower in the summer season. The cream is in cold weather best raised to the required temperature by floating some of it in a tin vessel within a furnace of hot water. The churning should be done steadily, a pace of from fifty to sixty revolutions per minute being found desirable. There is a ventilating peg in some of the best churns, which is removed occasionally during the first ten minutes of churning to give ventilation. Churning should be stopped as soon as the butter forms, or the quality will be injured. The time occupied in churning usually varies from twenty to sixty minutes; but where the temperature is too low, or the cream is from the milk of old-milched cows not liberally fed, churning is sometimes a tedious and unsatisfactory operation.

As soon as the butter is formed in small particles the buttermilk is let off by means of a plug, a hair sieve being used to prevent waste, and the little butter which flows through the tap is returned to the churn. The churn is then half-filled with pure cold water, and after a few revolutions the water let off. This process is repeated until the water comes out of the churn as clear as when it was put in. The butter may then be taken out with a pair of wooden patters without coming in contact with the hand. The water may be pressed out, and if desired a little fine salt mixed with the

butter by working it with the wooden patters, or by the use of a mechanical butter-worker. There are circular butter-workers which are of use in improving the condition and purifying inferior or badly-made butter, but when butter is thoroughly well managed from the first they are not generally necessary.

In the winter season butter is generally slightly coloured by a special preparation of annatto, or sometimes by the use of the liquid from scraped carrots. The most scrupulous cleanliness in every particular, and neatness and attractiveness in packing and preparing butter for market are desirable. In this latter particular French butter is generally in advance of our native produce.

The use of salt in what is sold as fresh butter is a matter of taste. In the northern half of England fresh butter is generally rather heavily salted. This we think a mistake, as it overpowers the flavor of good butter, and is quite unnecessary to secure its keeping as long as it is generally required. The process of making butter not required for immediate consumption, is the same as that above described, the butter being salted regularly with from half ounce to one ounce of fine salt per pound of butter, and the butter pressed down tight in a clean jar or firkin, and covered with a little salt and a thin cloth. The finest flavoured butter may be made from cows fed on good sweet grass in the spring or summer season. The use of some meal or some kinds of cake, whilst increasing the yield, does not injure the quality. Linseed cake is somewhat objectionable.

The value of the butter imported into England is stated by good authority to amount from \$50,000,000 to \$60,000,000. Canada contributes to this supply; but much of our butter is of a very inferior grade; or as an English circular recently received by us says, "It gives receivers trouble to move at anything like satisfactory prices, importers often suffer heavy losses." We should remember that in the end the producers are the real sufferers. If our farmers and those connected with agriculture would endeavor to thoroughly understand each branch of their business into which they enter, they would find it greatly to their advantage. More reading and study is necessary in the farmers' families.

How London Gilt-Edged Butter is Made.

In Dorset dairies the milk stands for twenty-four or thirty-six hours, according to the season of the year, and in some cases is skimmed the second time after having a second period; the cream is considered ready for churning immediately after it is skimmed, and during the hot weather is commonly churned every day, while in cold weather the churning is done only on alternate days. To this practice of churning the cream while it is quite sweet and fresh, is owing in a great measure, the reputation which Dorset butter has long possessed; the practice, indeed, presupposes the strictest cleanliness with respect to milk-pans and other vessels used in the dairy, for without this primary condition the daily churning would be practically valueless. The old-fashioned barrel churn with improved beaters is commonly used in Dorset dairies, and after the butter is taken out of the churn, the greatest care is taken to wash out all traces of butter-milk, so as to avoid the light colored streaks that commonly appear in ill-made butter. The coldest and cleanest water that can be obtained is used for this purpose and the butter is repeatedly turned and pressed on a slab of wood. A dairyman whose hand is naturally cold always succeeds best in butter making, all other things being equal.

It is seldom that the butter is salted in a systematic manner; the dairyman generally guesses the quantity of salt to be used, and an experienced and careful person can guess it with surprising accuracy; it is, however, generally understood that the butter intended for market is more sparingly salted than that intended for the home consumption.

It is clear, however, that the Dorset dairy maids have got into a better system of butter-making than most of their sisterhood in other parts of the country have done, for Dorset butter has a popularity greater than the butter of any other country, and much butter made far enough away is sold in London under the assumed name of Dorset butter. The name is pirated, and the name sells the butter. This sort of thing is at once an honor and an injustice to Dorsetshire.—*Prof. Sheldon.*

Milk of Different Breeds.

BY PROF. SHELDON.

Some time ago we had occasion to make an examination of the milk of different breeds of cattle for the benefit of the class in dairying. The facts brought out by this experiment, although not by any means new seem to us to be of interest beyond the limits of the class.

In the examination referred to the milk of the pure-bred Jersey cow, and the half-blood Jersey, and the pure-bred Shorthorn was placed in separate test-tubes to the depth of five and one-half inches and allowed to stand twelve hours. Care was taken in the outset to secure the milk of cows which had received substantially the same feed and general treatment. The amount of cream thrown up by the different kinds of milk is shown by the following statement:

5½ inches Jersey milk gave 11-15 in. cream; 5½ inches half-blood Jersey milk gave 14-16 in. cream; 5½ inches Shorthorn milk gave 5-12 in. cream.

It will be seen from the above that the milk of the half-blood Jersey cow was the most productive of cream than that of the full-blood Jersey, and the Jersey milk was much richer than the short-horn. The fact that the milk of the half-blood Jersey was richer in cream than that of the pure-bred agrees with the common experience of dairy-men, who assert that the half of three-fourths bred Jersey is, for all the practical purposes of the dairy, equal to the full-blood.

Those who sell milk should return the phosphates thus removed from the farm by the milk thus transported. Every forty gallons of milk, it is said, contains the equivalent of one pound of bone earth. Estimating a cow to yield 750 gallons of milk per year, it will require 19 pounds of phosphate, equivalent to 30 pounds of bone dust. If the calf be sold off, we may assume there is a loss of 20 pound of bone, and the waste of phosphates in the urine equals four pounds. And thus for every cow a dairy farm maintains it will lose of earthy phosphates as much as it contained in 56 pounds of bone. This shows the amount which should be returned to the land if the soil be kept from becoming impoverished. When large quantities of bran and cotton seed meal are fed to the cows, and the liquid and the solid manures carefully saved and returned to the soil, the loss sustained by selling milk and calves will be made good.

Forty-five per cent off "foreign fats" in butter is considered by British justice rather too much of a poor thing, and in two recent cases the Judge imposed fines of \$100.

TECHNICAL EDUCATION.—Prince Leopold recently laid the foundation stone of the new College for Technical Education, established by the City and Guilds of London Institute, in Finsbury. His Royal Highness said the object of the institution was a truly national and patriotic one. The old apprenticeship system, whatever its merits might be, and whatever good work it might have done in the past, was not equal to the exigencies of the present age; and they were beginning to realize that a thorough and liberal system of technical education must be placed within the reach of the artisan in order to enable him to hold his own against foreign competition.

AGRICULTURE IN PRIMARY SCHOOLS.—We learn from an English correspondent of M. Georges Ville that already in one department of France alone there are no less than 200 schools connected with which plots of ground are worked by the teachers and the scholars, with a view to the illustration of those methods of ascertaining the agricultural character and value of the soil.

OFFICIAL statistics show that during the past ten years the annual production of buckwheat in the United States of America has increased about two million bushels. Barley has increased fifteen million bushels, and rye three million bushels in the same length of time.

A GOOD MOVE.—It is stated that Mr. Kenneth Chisholm, M. P., has offered the county of Peel Agricultural Society the sum of \$100 as a special prize to encourage the improving and beautifying of farmers' homes, which amount the Society has supplemented with \$50.

Poultry.

Poultry Items for the Farmer.

BY R. A. BROWN, CHERRY GROVE, ONT.

How many farmers know what roup is, or how to treat it with success?

If I were to answer I would say, not many.

Very often I have spoken to farmers about diseases among their flocks of poultry, and found they did not know there were such complaints. Roup is a very disagreeable, and if neglected, a dangerous disease. It affects the head in somewhat the same manner as "catarrh," and is sometimes taken for that disease. When a bird is suffering from this the face appears swollen, the nose imparts a disagreeable odor, and when of long standing is very offensive.

The first indications are a rattling in the throat, which is caused by phlegm about the wind pipe; even the eyes are filled with frothy humor, and before the fatal termination ensues the bird becomes blind. Sometimes there is a loss of appetite, when the bird becomes drowsy, and in about ten days the disease terminates in death, if not attended to. It is very contagious and will spread through a large flock in a short time if the ailing ones are not separated at once from the others. There is a dispute at present among breeders as to the cause of roup; it is generally believed that it is brought on by damp runs, or roosting in exposed places and neglect of care.

To remedy, bathe the face with sugar of lead and strong vinegar, put a drop of kerosene oil in each eye twice a day, and once a day three or four drops down the throat. Press the nose between the thumb and finger and remove all humor from it; if sponged out clean all the better; drop a drop of the vinegar solution in each nostril; feed some red pepper once a day, or make a bread pill with some red pepper in it and give once a day for a week. Of course you must have your patient removed to a dry, clean apartment, where it can be readily secured. Give fresh, clean water at least twice a day until better. If attended to in this way for a short time, success is sure. I have cured two of the worst cases of roup I have ever seen with these remedies, and am sure of a cure every time if directions are followed.

Cholera with poultry is supposed to emanate from insects in the depository canal, or discharge passage. It is sure that if those affected with this dread disease, if from vermin, death is the consequence, either with or without remedies being applied. In France it is certain that fowl are attacked with insects which are termed the Michobion, are sure death to nearly every bird affected. I have often seen hens purged, but never saw a case of real Cholera, as reported by others. The best practice would be, that tried in the State of Georgia and said to be correct.—Give to an adult bird one teaspoonful of castor oil at night or morning. In two hours give a teaspoonful of tea made from smart weed (polyganums); dissolve then a small lump of alum, and in each dose one drop of laudanum. I have seen this administered to sheep and cattle with good success. When any purging is seen amongst fowl give a pill of alum about the size of a pea for immediate use; then dust a small portion in their feed or water, which is a certain remedy. The best tonic is cayenne pepper, asafoetida and sulphur, mixed and given in small quantities about twice each week; this will have a good effect on the flock if they are not overfed with it; it helps the digestive organs when given in moderate quantities and not too often.

To help the moulting, give camphor in their drinking water for a week. Then tincture of iron in the same way for two weeks.

Healthy, vigorous fowls may be easily known by the rich, red combs, which is as sure an indication of the state of health they are in as the pulse is to the human physician.

To prevent hens from sitting, place them in a small enclosure with a good, vigorous cock as a companion, and give plenty of food; if well filled with cayenne pepper all the better, two or three days is all that is needed in most cases. If this is not effectual, stand her in about two inches of water and keep her there by some means for two

days, and then keep her away from her accustomed nest and well fed for two or three more, and the effect is certain.

Home-made nest eggs may be made by taking a shell (the smaller the opening in it the better) and filling it with water and plaster of paris; fill the shells full, and when the contents have hardened peel off the shell and you have as good a nest egg as you can buy for ten cents; if you wish to color use a little annatto, and your hens are satisfied.

The Creve-Cœur Fowls.

We give an illustration of these now favorite fowls. The name is derived from the town of Creve-Cœur in Normandy, near which the breed originated, and not, as many suppose, from the supposed resemblance of the comb to a broken heart—the meaning of the French word “creve-cœur.” No fowls, excepting, perhaps, the Houdans, have met with more universal favor than these. Quiet, domestic, great layers of very large eggs, hardy, prolific, eggs hatching uncommonly well, large bodied, and of the very first quality for the table, they seem to combine all but one of the requisites of the fowl for the people, and that is, they are non-sitters. As to their beauty, there is great diversity of opinion, some considering them very handsome, others very ugly. M. Jacques, a French writer, describes them concisely thus: Comb various, but always forming two horns; sometimes paralleled, straight and fleshy; sometimes joined at the base, slightly notched, pointed, and separating at their extremities, antler-like. The legs should be black, or very dark slate blue. Plumage entirely black, with metallic lustre.

Roosts and Roosting Benches.

There are almost as many different kinds of roosts as there are different varieties of fowls, but all are not equally desirable. Where but few birds are kept, and these only common, inexpensive ones, it may not be a matter of much moment whether they are high or low, or neatly made or only “in the rough.” In some localities it may be necessary to have high roosts in the poultry house, to keep the birds beyond the reach of the nocturnal marauders such as the weasels, foxes, dogs, etc., but then we have an idea that a closely shut door might answer equally as good a purpose, provided someone of the family make it his or her business to shut the door regularly each evening. In mak-

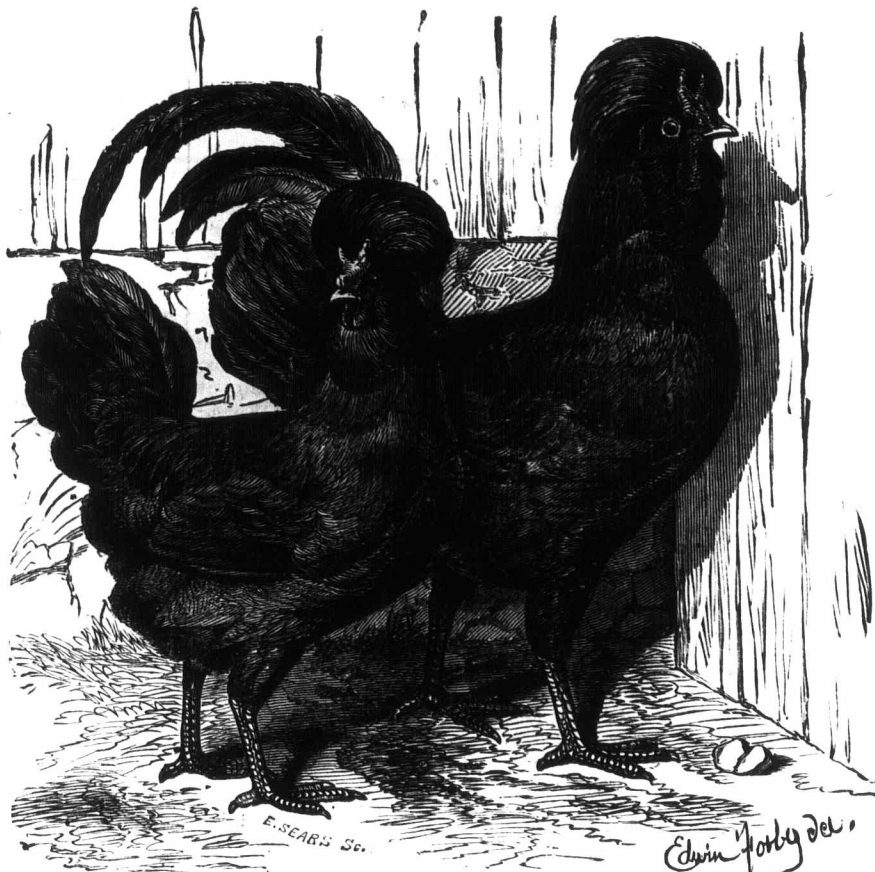
ing regular roosts, it is always best to have the poles or roosting slats so they can be taken out whenever it is desired to thoroughly cleanse the house. This can readily be done by nailing notched strips on each side to receive the roosting poles, slanting the strips so the last pole will be considerably higher than the first, which will facilitate the “bed going” of the fowls. The roosts should be made of easy access, and should not be more than three feet (two feet is better) high, at the lowest part from the ground, and supplied with a board to make it still easier for the fowls.

In nearly all poultry houses, roosting benches will be found a great improvement on the ordinary roosts, for they are so quickly removed, and can be put in any part of the poultry house whenever desired, being always ready for use. They should be from twelve to eighteen inches high, with the legs well spread apart at the bottom to give them a greater bearing and thus prevent them from overturning with the birds. The best and cheapest wood to use, especially as it is the easiest worked, is inch pine boards, which can soon be slit into suitable widths, from two to two and a half inches wide being about the proper thing, to secure nicety, as well as to aid in keeping vermin away; the lumber should be neatly planed, and if desired, a coat of cheap paint put on before they are used.

Fish for Poultry.

Poultry, whether kept in confinement or given the run of the farm, require meat food in some form to keep them healthy and enable them to become profitable to their owners. When the fowls are not restricted in their range, they can get all the meat diet they need, in the shape of insects, worms, &c., through a greater part of the season, the cold weather alone cutting off this supply. When the birds are kept yarded all through the warm weather, they must depend upon their owners for what food they get, of all kinds, tho' too frequently the meat food is omitted, either through carelessness or want of knowledge of the requirements of poultry in general. Eggs are highly concentrated articles of diet, and to produce these the hens must have good, strong food, and plenty of it, else the quality of the eggs will be poor and the quantity very small indeed. We know there are some few who feed too heavily with meat and meat scraps, but where we find one case of this kind, we can find at least a score or more of the other kind, and there is not much need, at present, for us to warn against it specially.

There are many of our readers who raise large flocks of poultry annually, who live on or near



THE CREVE-CŒUR FOWLS

large rivers or bays where fish are caught, in great numbers all through the season, and but few seem to know that fish, in moderate quantities, are most excellent poultry food, in connection with grain, both for the laying hens and the fattening fowls. In feeding fish the proper way to do is to fill a large pot (a “farmers’ boiler” is the best) with the fish that are thrown out as too small for table use or sale, and then cover these fish with cold water, build up a moderate hot fire, and about as soon as the water comes to a boil, the fish are cooked, which is found by seeing if they will readily fall to pieces. While still hot remove to a stout barrel, liquor and all, and stir briskly with a stout stick, and most of the bones will settle to the bottom. When the mass is cold it will be like thick jelly, and the fowls will eagerly eat it.

Some breeders contend that both the flesh of the birds and the eggs will partake of fishy flavor, if fed on fish. If fed in moderation, as all meat food should be, and in connection with grain food, we defy any one to detect any unpleasant or objectionable flavor either in the egg or the flesh. We have fed fish, as above, for several seasons and have yet to find any reasonable objections to their moderate use.—[Poultry Monitor.

Egg-testers are in use in England, by which an unfertile egg can be detected.

Summer Quarters.

Poultry need as much protection during the summer from the fierce rays of the sun, as they do in winter from the severe cold, although far too many of our farmers lose sight of this very important fact, and suffer corresponding losses in consequence. Birds compelled to stay in yards which have little, if any, shade during the entire summer, with the sun pouring down on them with the intensity it does in July and August, cannot thrive, while they are rendered much more liable to disease and disorders. It pays, and pays well too, to give the fowls comfort at all times, and it costs but little to furnish the necessary shade, no matter how large the runs may be. Trees, such as plum, peach and apple, should at once be planted in the runs, especially the former, which seem to thrive better there than the other kinds named. As these trees will not afford much shade for a few years, temporary shades must be made by making skeleton sheds of poles along the sunny side of the runs, and then covering them with boughs, cedar limbs, or almost anything cheap and convenient which will afford the necessary shelter from the sun. These may not look very handsome, but then the utility compensates fully for the lack of beauty.

Some breeders make the top covering with coarse muslin stretched on frames, first having treated the muslin to coatings of paint to render it more durable and impervious to water. If stored away carefully when not needed as sun screens they will last for several seasons, and are by no means unsightly, especially if neatly arranged in the yards or runs.

Some breeders, to make the poultry houses more comfortable in the summer for their birds, remove the sash and make a movable frame of slats or lath to take the place of the sash, while the solid door is removed and a slat one substituted. This is a very good plan during the hot, still nights of summer, but when high winds as well as rainstorms prevail, the fowls are rendered very uncomfortable all night. A good plan is to have it arranged so either can be used at pleasure to suit the weather. Any one with average ingenuity can make the necessary alterations to suit.

Thorough ventilation must supplement extreme cleanliness, else disease and sickness will creep in these hot, sultry days, and claim by far the largest share of the profits. Ventilation can be secured without having a draught blowing on the birds constantly, endangering their health instead of benefiting them.—[Poultry Monthly.

Much of the profits from duck raising depends on raising prime stock. The Pekin, Rouen, Aylesbury or Cayuga duck will, with ordinary care, bring in a handsome return without much outlay. Ducks are great foragers, and will greedily devour insects, grass, slugs, larvae and vegetable refuse. They are not as fastidious about the quality of food as other kinds of poultry, although quantity even of the coarser kinds is always acceptable.

Farmers in general have all the facilities necessary for raising ducks advantageously. They do not require a large supply of water, as many suppose, for successful rearing. A pond for the accommodation of a large flock could be easily made in a short time and would more than repay for the labor. Ducks need but very little feed besides what they pick up. They acquire fat much more readily than other fowl except, perhaps, the goose. They grow steadily, and their flesh is in much demand by a large class of city folks. Any of the improved breeds of ducks are generally prolific layers, and with ordinary care will yield a handsome profit.

Garden and Orchard.

Native Flowers.

In the search for beautiful plants and shrubs grown in far-off lands, however commendable and important in progressive horticulture, we are apt to neglect some of our beautiful native plants, or even some of those of foreign origin that have become familiarized to our sight through long years of growth in their new homes. Oftentimes the value of a plant in the eyes of the purchaser depends more upon its rarity and cost than upon its intrinsic merits. Again, fashion has much to do with the demand for particular varieties.

We do not intend writing a fashion article in this connection, but we are pleased to note a growing appreciation of the beautiful in nature, even among the humblest and commonest varieties of flowers. In this same direction we have given an illustration on this page of the deep colored Canadian lily, which ranks as a most beautiful plant and should be more generally grown among us.

The new lilies introduced from Japan, in the past few years, have attracted so much attention that we fear our native species are being neglected. This ought not to be; for beauty and merit in the lily family may be found at home as well as abroad. Our woods and fields are well supplied with native species of the lily, and can be improved more or less by cultivation. The Canadian lily (*Lilium Canadense*) is found in mountain meadows, from Georgia northward into Canada. The flowers are usually yellow, spotted with purple, but the color is quite variable, and several distinct varieties are often found growing near together. This species is quite distinct from the *Lilium Superbum*, found common in low swamps, the stems being few-flowered, usually not more than two or three on each, while the latter often has ten to twenty disposed in a pyramidal raceme. The color of the *Superbum* is also deeper, there being more of a red or orange instead of yellow. In form and size the flowers of *Lilium Canadense* are as shown in the accompanying illustration.

The Canadian lily is, as might be expected from its native habitat, perfectly hardy. We have it for some years growing in our ground, and without even the natural protection of the forests and native shrubbery from which it was taken, it has improved in its present home. The colors—dark red and purple—are deeper and richer, the flowers are larger and the stem taller.

One of the most beautiful of our native flowers is the *Hepatica*. The leaves are evergreen and three-lobed, dark green on the top and purple beneath; the flower stems are numerous, bearing single flowers, purple, blue or white, which expand before the appearance of the new leaves. It is the earliest of our spring flowers, blooming on the first days of April.

The Anemone, or Windflower, is another early blooming flower. There are several varieties in our rich, gravelly woodlands. A variety of it has been grown for some time in the flower gardens, where it is a great favorite.

We have seen some very handsome borders planted wholly with native flowers—hepaticas, anemones, blood roots and others.

The Plant Lice.

Plant lice are very injurious not only to house plants, but also to the vegetation of fruit trees, and whatever injuriously affects the foliage is sure to be prejudicial to the growth of wood and fruit. It also works great mischief in the hop yards. The Country Brewers' Gazette, London, England, says:—

Another enemy is the plant louse (*aphidius*), and there are but few yards where it does not put in an

of course, that remedy is only effectual if the insect has not increased to any great extent. It would also be advisable to examine the several plants and to remove and destroy the leaves that are mostly infested; but such a procedure would necessarily involve a vast amount of labour and loss of time in the case of large plantations.

Gladiolus.

The "PRINCE OF GLADIOLUS" GROWERS," Mr. Kelway, Langport, England, has 20 acres devoted wholly to this plant, and nearly 2,000 named varieties in his catalogue, and he adds to the list some dozen or so each year, selecting from nearly 200,000 roots. Last season 100,000 spikes were sent to all parts of the country for decorative purposes, and the corms range in price from \$1.25 a hundred to \$15 each. A correspondent of the *London Journal of Horticulture* gives a report of cultural processes, from which we take an extract:

"Here is a piece of ground, for instance, of several acres, where the corms have been literally ploughed in. The drills are done by the plough, the roots planted and covered with the plough, much in the same way as potatoes are in some cases; while there is another smaller piece where each corm has been carefully planted, and the ordinary garden method is adopted." He does not find that the soil makes much difference, and in this I am inclined to agree. Moreover, the use or non-use of manure does not seem to effect them. In the early days of gladiolus-growing manure was considered injurious to them, and all were advised never to use it; this is an utter fallacy. I saw some small corms of the choice varieties, which were sown, in an old hotbed, about three inches of soil resting on the manure, yet here they were as healthy as in any other part of the ground, while in other places a heavy coating of manure had been applied on the surface without the least affecting the health of the plants, unless it was indeed to make them more vigorous."

Budding.

This is the time when we like to call the attention of farmers and gardeners to the work of budding their fruit trees. Those who were too much hurried in their spring-work to attend to it in April and May, can now make up for lost time by resorting to this mode of increasing the variety and amount of the orchard produce. Budding can now be done and continued through this month, July and the fore part of August. It is not as difficult as grafting, but like the latter it must be understood just how

it is to be done, though this is easy to do by giving a little attention how others do it. To cut a bud from the parent branch, it should take about an inch and a-half of the bark and a thin slice of the wood for three-fourths of the length of the bark, the bud being about in the centre; and in setting it cut a slice in the bark of the tree only, say two inches in length, and at the top make a cut across the slit; then carefully raise the bark up with the knife and insert in it the bud. Do it as neatly as possible. Then wrap around the entire slit and up to bud bass matting, using strips a foot long and half an inch in width; tie in a



THE CANADIAN LILY (*Lilium Canadense*).

appearance. The origin of this vermin, which most usually infects the early hops, is generally attributable to great moisture and the low temperature accompanying it. Some hop growers are also of the opinion that the plant lice find a favourable hatching place in the crevices of the wooden poles used in hop yards, and recommend the substitution of wire trellis work. They claim that the plants trained on wire trellis work are subject to much less disease than those for which poles are employed. To exterminate the plant lice it has been recommended to sprinkle the plants with chloride of lime and chlorine, dissolved in water; but

knot. Of course the branch or stock in which the bud is set remains just as it was before, no topping or cutting off.

The budding of peach trees is best deferred until August, and is always adopted instead of grafting, which is not recommended for this fruit.

Popular Fallacies About Insects.

There is a popular idea that a hard winter is very destructive to insects, and that they will be fewer in the summer following. The idea is not a true one. When our winters are steadily cold few insects hatch out of the egg or the chrysalis state; in those winters that are mild, large numbers of insects come forth on fine warm days and nights, and great numbers will perish before they can lay eggs or change their forms, by frost, storms, or birds. This is not theoretical, but proven by the observations of over forty years spent in the study of natural things. Any one may see on warm days and nights plenty of flies, moths, gnats, &c., in winter, and these are almost invariably destroyed before they can breed. In some springs we have a continuance of cold, ungenial winds which hinder a good state of growth in plants; at such times plants, shrubs, and even trees get infested with great quantities of insects, especially what is called the green and black aphid, or fly; many people still believe that these insects are brought in the winds but this is far from the truth; the plants by their slow state of growth are made more favorable places for insects. By those conditions every gardener who knows his business knows that insects get most upon his plants when they are in a low state of growth; the eggs and chrysalides are always somewhere around, and when circumstances are favorable they are ready for work.

An old gardener once expressed it, that only ignorance and idleness ever allowed insects to get "boss" in gardens or houses. The old man's words are true. Many good people have a happy knack in dealing with the insect world; they will see a few one day on their plants, and leave them to some other time before they undertake to stop them either from breeding or eating, and then often commence to save their plants when they are well crowded, and it takes as much to destroy the vermin as often fixes the plants also. Those who wish to keep insects in check must never have any "tomorrow" about their ways but must act as soon as the eggs, chrysalides, or vermin in any state are seen. Destroy the first lot and it is rare that there's much trouble after. Those who have only a few plants in a window can easily keep them clean. If the plants are not large take the pot in the right hand, by its bottom, and let the stem of the plant between the middle fingers; then pour the head in a pail or tub of soapsuds, and then rinse it in clear water. If this were done once or twice a week, it would benefit the plants even if no insects had to be killed.

It would be easy to write many chapters how to destroy insects, but a watchful eye and prompt action in destroying them is worth all that can be recommended, and the finger and thumb will often keep a large place pretty free from such pests. These are occasions when it is needful to apply wholesale (as it were) means. The English farmers could not grow turnips were it not for their free use of coal soot. As soon as their turnips get into a second leaf a little black fly comes in millions, and would destroy the crop (which is there an important one), but by covering the plants with soft coal soot they are saved. The soot don't kill the insects, but insects are somewhat like human beings; if they get well annoyed they shift, and the soot as it washes off the plants makes them grow faster. Soot is used over large areas of other crops to drive away insects, and as a fertilizer. It is not an uncommon thing to see ten or twelve car loads of soot leaving a town or city for the farmers in the country. Were the uses of soot more generally known we should have fewer complaints about insects.—[A Perambulating Gardener, in Prairie Farmer.

Mulching Newly-Planted Trees.

There are some people—among them good nurserymen—who doubt the value of mulching newly-planted trees, and offer excellent reasons for it. While we do not agree with them to the extent to which they carry their unbelief, we think they are partially correct. To pile around a young tree a mass of grass, weeds, manure, &c., and allow it to remain undisturbed through the whole or the greater part of the hot, dry season, may be of no service, rather an injury to the young tree,

as the fresh air is excluded from the soil and it becomes dry and hard. But this is not the way that we recommend mulching to be done. We recommend that the mulching should be removed four or five times during the season, give the earth around the tree a careful stirring, then water if the soil needs it, and apply a fresh mulch. It is a good plan, also, after planting a tree in the spring, to give the soil around the stem a dish shape, in order that it may receive a full supply of rain. This mode being followed, our own experience satisfies us that mulching is an excellent thing, and for us has saved many a tree perishing from drought.

Champion alias Beaconsfield Grape.

In the report of the "Fruit Growers Association" of Abbotsford, P. Q., the following is found concerning the "Champion or Beaconsfield" Grape:

"This variety was also on the table at Abbotsford, and on account of its earliness attracted special attention. It was also exhibited in 1877 by L. W. Decker, of Montreal, who had bought it in 1871. Since then it has been largely imported as the Champion, and sold as such; and more recently imported as the Champion and sold as the Beaconsfield. It combines the main characteristics of a market fruit. It is essentially a pioneer grape. It was in favor the poorest, with one exception, of the thirty-three exhibited. It is, however, quite good enough to sell. The market does not demand quality in a grape any more than it does in a pear or in an apple. The Champion has the earliness, size and color, necessary for a commercial grape, and as such, and a forerunner of finer fruits, it may prove of great service to our northern country. As a commercial grape, however, it has a weak point in its shortness of season. The Champion drops from the bunch, somewhat—less so we think than the Hartford; but our knowledge on this point is limited. It is short in its season, though nothing like so short as a Peach Apple; but in a general way it is like the Peach and Astrachan apple, early and perishable, yet profitable. The money aspect of this Champion grape, the proprietors of the vineyard at Beaconsfield must surely have carefully weighed, and their firm belief in it they have proved by the fact that they have planted out seventeen acres or 12,100 vines.

The Time for Pruning Evergreens.

Many of our readers can remember when no one thought of pruning an evergreen with the view of bringing it into shape, save to cut away the lower limbs and bring it out of all decent shape. By evergreens we now refer to the cone-bearing trees and not to hollies, rhododendrons and other broad-leaved evergreens. Several recent letters ask the proper time for pruning these trees. A more important question should take precedence of, and also decide that—namely—"Why prune at all?" No one should cut a branch, large or small, evergreen or deciduous, without having a clear idea of what he does it for. Pruning may be done to accomplish the most opposite ends. We may prune to promote growth of limb, or we may prune to check the growth, and so on. Let us say, in the first place, whatever else is done to an evergreen do not cut it away below. Left to themselves, these trees form pyramids of verdure of the greatest beauty. A tree with its broad base resting upon the ground and tapering gracefully upwards is a most pleasing object and gratifying in its symmetry and apparent stability to every person of taste. Cut away the lower limbs, leaving a naked trunk of six to eight feet, and all beauty and symmetry are destroyed, and we have an object as graceless as a hay-cock upon a gate-post, a horticultural horror. This treatment is often excused by the plea that the trees were at first planted too closely, and now light and air are shut out, hence this cutting away of the lower branches. If the trees are too near the house, either remove or cut them down—but do not cut them up. There is no proper time for pruning of this kind. If the tree grows one-sided or irregularly, and it is desired to have an increased growth at any point, the proper way to secure this is to cut the branches back to induce a new growth to push vigorously. Pruning for this purpose should be done when the season of growth is well matured in early autumn. If the irregularity is due to an excess of growth, and it is necessary to repress this, then the proper time to do it is immediately after the growth in length has been completed, but before the wood has become hardened and matured. Much may often be done to improve the form of a tree and fill

out their places by bending some of their branches and tying them in the proper position, taking care that the ligatures are no where so tight as to check the enlargement of the branches. If held thus for a few years, they will retain their position. The pruning of evergreen hedges is governed by the same rules. In the first years of a hedge we wish it to grow as quickly as may be to the required height, therefore, if the growth can anywhere be encouraged by cutting back it is to be done in early autumn. When the hedge is as high and broad as desired, we then wish to repress further growth, and the main pruning is done as soon as the spring's growth has been made, but while the shoots are still tender. Cutting in that state tends to check the growth. This, in an established hedge, is the most important pruning, that performed in the fall being merely to correct and preserve the shape. In cutting all horizontal branches half an inch or more in diameter, make a sloping cut on the underside of the branch, so that in looking down upon it the wound is not seen.—[American Agriculturist.

The Phylloxera in America.

This insect so much dreaded by vine growers is now causing great injury to the vineyards of California. Some of the richest vine-bearing provinces in France have been devastated by its ravages, and of late it has spread greatly through the vine-growing districts of the Southern States, and if some remedy be not discovered and applied California wine will be only a luxury of past years.

The Legislature of California has recently passed an act in the interests of grape culture in that State. Under its provisions a commission has been appointed to investigate the diseases and insects affecting the vine, with power to establish a quarantine if found expedient, and otherwise regulate the traffic in and also the cultivation of vines throughout the State. The chief officer is to receive not more than \$150 per month for actual service, with travelling expenses added, which are not to exceed \$500 per annum. In addition to the above, the Commission have a certain sum of money placed at their disposal for incidental expenses. Their principal duty is to look into the phylloxera question, and discover, if possible, some way of checking the spread of this destructive parasite, which, of late, has become so prevalent in the vineyards of California.

Privacy of Gardens.

No private garden, however beautiful, ought to be too open to the public gaze. It looks too much like an effort at ostentatious display and invites miscellaneous and careless criticism too freely. We would not have enclosed in with excessive care by impervious hedges the whole frontage, as we see some gardens and many lawns, for that on the other hand looks like selfish exclusiveness. There should be some openings through which glimpses of the interior could be obtained, and, thus seen, a garden always shows to more advantage than if entirely exposed. The general principle is carefully observed by landscape-gardeners in laying out extensive grounds, openings being carefully made to allow of views near and remote. There is not much pleasure for guests to stroll in a garden that is entirely open on a public highway and always subject to impertinent gaze and idle remark. The slightest movement or pleasantries is sure to attract attention, which while it may suit a certain class who like display, is very distasteful to the cultivated and refined. Some openings should always be left to satisfy the curiosity of those who like to see beautiful grounds, and these will be quite sufficient to answer the purpose without exposing the whole place and making a vain display of everything.—[Germantown Telegraph.

Never forget that an orchard, as surely as a corn field, consumes the fertility of the soil, and that to starve the soil is as sure to prove unprofitable in the one case as in the other. Trees may live on from year to year upon what they can draw from an exhausted soil; but it will prove just as fallacious to expect a good crop of fruit under such circumstances as it would under similar circumstances to expect a full crop of corn or other grain. We have no doubt but that the vigor consequent upon abundant nourishment, will in some cases enable an orchard tree to carry its crop safely through unfavorable circumstances that would be fatal to the crop of a feeble one.

Agriculture.

The Culture of Corn.

We are gradually learning more about the possibilities of the corn crop. We are learning that with sufficient fertilizing and good culture we can easily reach from 60 to 100 bushels of grain per acre in place of the 25 to 50 which were formerly the usual yield. We are also discovering that there is more in the cultivation of this crop than we had supposed. Formerly Western farmers used to boast that their rich soil was able to grow both corn and weeds, and it was often the case at harvest time that the corn was almost hidden from sight by weeds which all but overtopped it. Still corn produced a fair yield, but how much more it would have produced had the weeds been kept down by cultivation we can only guess. It is now we are learning something of this. The last census reports enlighten us in this respect. From these we learn that the vaunted superiority of the West is disappearing. That the average yield of corn in the Eastern States now slightly surpasses that of the West. While the former had been slowly increasing, that of the latter has been gradually decreasing, until now it is inferior. The reason of this is not that the Western soil is poorer than the Eastern; it is simply weeds. The Eastern soil is better cultivated. It is in this respect something like the better thrift of the owners of the sterile mountain countries or the colder climates, where poverty of soil forces to more productive industry, as compared with the sunny climates and rich soils of the South, where exuberance of vegetation induces carelessness and unprofitable contentment. It is all in cultivation, for no soil, however rich, will produce a full crop of corn and a full crop of weeds, and the Western farmer simply throws away his grand opportunities. It may be that the low value of the corn may not pay for the requisite labor, which is scarce and dear, but it cannot always be true, even should it be so now, which we must doubt, that this labor well applied cannot be made profitable. This is a matter which concerns the Western as much as Eastern farmer, for when the latter finds that he can grow corn more cheaply by better methods of cultivation than he can buy Western corn, a considerable outlet for that product will be closed. This is now becoming possible, for if the difference in favor of the Eastern corn-grower shall still increase, in course of time the difference in the value of land will be neutralized and the relative advantage enjoyed by the Western farmer will disappear. As yet the Eastern farmer has not learned how great a benefit may accrue from labor-saving appliances in corn-culture. The Western farmer avails himself of all these. He has his check-row planter and his sulky cultivator. The Eastern farmer, in many cases, still makes his cross-furrows with the plow, drops the seed by hand, makes the hill with the hoe, and does much of the cultivation with the plow and the hand-hoe. But he may have labor-saving implements as well as the Western farmer, with which, counting the increase of crops, the cost of his corn may be reduced one-half. He has the horse corn-planter, which is able to plant and cover eight acres in ten hours, forming its own drill, dropping the seed at regular intervals and in proper quantities, and covering it the right depth, as well as could be done with the hand. The first cultivation may, then, be given before the seed is above the surface with the cultivating harrow. This destroys the young weeds when in the germ; and before they have taken hold of the soil. If the soil has been plowed a week or two before the planting, a final cleaning may be given with this harrow immediately before the planting with great benefit. After the corn is up and has taken root the harrow may be used again without injury to the plants, and if a few are torn up it will save after labor of thinning the stand, if that should be needed by reason of too liberal use of seed. Up to the time that the corn is a foot high this harrowing may be given at sufficient intervals, leaving it then in excellent condition both as to vigor of growth and freedom from weeds. After this the use of any one of the excellent horse-hoes that are on the market, or a good shovel toothed cultivator, will keep the crop clean until it is laid by and shades the ground so as to keep down the weeds that may start after that.

The plow should be abandoned as a corn cultivator. It does not cover as much surface as the horse-hoe, and although it may not be injurious on some soils and under some circumstances, yet

otherwise it may do serious harm to the crop. Shallow cultivation is always beneficial to corn; deep cultivation may be sometimes. With the one there is no risk under any circumstances; with the other there is much risk. Level cultivation leaves the surface in the best condition after the crop, and one may seed down to grass or clover with this crop, if it is thought desirable, under level cultivation. Hilling of the plants cannot save them from being laid by a severe storm, for the small support thus given is nothing as compared with the force of the wind on the broad leaves. But the hills may, and do, prevent the crop from raising itself again, for the soft soil is washed down upon the roots, and serves to wedge the stalks down so they cannot recover. With drill-planting the crop may be largely increased. The lowest ascertained increase of yield is 25 per cent. of grain and fodder. Considerably more than this has been gained by planting 18 inches apart in drills 3 feet apart. This is precisely double the seed planted at 3 feet apart. There will be 9,680 hills to the acre, and with but one good ear to the hill there will be 70 to 90 bushels to the acre, and with but five pounds of green fodder to each hill, the crop will reach 24 tons per acre. This growth can be easily forced with moderate fertilizing and thorough cultivation. It has been done in many cases, and may be done always if the right means are used. It may not be wise for a farmer who has been used to the old-fashioned system to risk his whole crop by suddenly changing his methods. But it is wise to try the experiment, because success offers a reward much larger than any loss or damage that may occur from a failure. It is a case in which everything is to be gained and nothing to be lost.—[N. Y. Times

Blasting Stumps.

Mr. E. Tanner, writing to the weekly Star, gives his experience on this subject as follows:—
 Sir,—For the benefit of those wishing to remove stumps from their land I will state my experience and observations as follows:—Some years since wishing to remove from a ten acre lot many large pine stumps, and being accustomed to blasting rock I attempted to do the same with the stumps, but by reason of the blast diffusing its force so readily through the open grain of the wood failed to effect my object. I then of sheet zinc formed cartridges with the blasting powder and one end of the fuse to be used enclosed therein. Then using a 1½ inch auger I placed the cartridge in as central a part of the stump as possible, stamping it firmly in with coarse sand or brick dust, when I succeeded in so blasting them that many from two to four feet in diameter were wholly used for stove wood, and the land entirely freed from them. While proceeding with this work I learned that a few miles from my place dynamite was being used for the same purpose, and therefore proceeded at once to learn the process and expense incident thereto, when I was fully convinced that the process which I originated was far preferable both as to expense and safety of practice, with quite as great success.

To form cartridges a sheet of zinc (30 inch) cut 4 by 5 inches, makes 126 (old tin or zinc from under a stove might answer); to form for use with 1½ inch auger, use a 1½ inch hard wood pin held with its end upright; wrap the zinc snugly around, closing it in upon the end of pin, then remove and nearly fill with powder, inserting the fuse; and a light wad of paper close in the end, which will hold all in place ready for use; the above number would cost about \$3.50. While the charge for each dynamite cartridge with fuse and detonating cap to explode them was then 5 c.—[ELI TANNER, Bowmansville, Erie Co., N. Y.

The Value of Soot.

The Chicago Times places the following estimates upon soot as a fertilizer:

"Soot is a disagreeable thing, at which everyone lifts up his or her hand in holy horror. Yet it is one of our most valuable fertilizers, and for overcoming insects, it stands very high. The soot from soft coal is the best, and any one who wastes it wastes wealth; for we need every ounce of it in the gardens and fields of the country. This is no whim or theory; its uses are well known to every practical gardener. Our cabbage fields and gardens are all visited with common whitish-yellow butterflies each year, yet this insect is easily driven to seek its food in some other place if soot is sprinkled over the plants on dewy mornings, or when they are wet. The writer had once charge of a garden which had

been unfortunate in the production of any of the cabbage family, from cauliflower to Brussels sprouts. Soot solved the problem. The operations were to first scatter a thin coat of soot on the soil where the seed have been sown. This was worked in so as not to touch the seed, either with rake or fork, for it is fatal to seed if touched when germinating, but after the leaves begin to spread they like it. Our professors have been trying to make "club-root" in the cabbage tribe a disease, but if the soot is used as described the disease is seldom or never seen. After cabbage of any kind are raised and ready to plant, if their roots and stems, right up to the leaves, are dipped in a paint made of soot, soil and water just thick enough to stick to them, few ground insects will attack them. A good many can be dipped at one time. Land where carrots, turnips or onions have to be sown is always benefited if a good dressing of soot is applied. The turnip crop is an important one in England, and were it not for a free use of soot, it could not be grown, nor could wheat; it is a common thing to see a train of soot leaving the large towns for the market gardening and farming districts. Here is a new source of employment for American citizens, and if it were collected, as in England it would sell.

"If rose bushes were dressed about the first week in May with soot, when they are moist, we should not see those bad looking roses or bushes that we so often see now, that look, in fact as if they had been burned when the caterpillar has feasted on them a few days. The caterpillar that goes by the name of roller-fly, because it rolls itself up in the leaves of roses and other things and eats into the buds of roses, when feasting it is driven away by soot sprinkled over the bushes freely, about the latter end of April or beginning of May, as it is about that time the eggs begin to hatch that have been laid on the bushes, and it is well to repeat the dose about a week before the roses are likely to open. The soot will generally be pretty well off before the roses are fit to gather, and ladies will not be annoyed by finding a big ugly grub inside their handsome flowers; the smell of the soot is soon gone, when it is exposed to the atmosphere, as its smell is chiefly ammonia, which is very volatile.

"Soot increases the color of the leaves and flowers of most plants, and gives a vigorous growth.

"A gentleman of Indianapolis who was advised to use soot to drive insects from his plants, reports that his wife thought he had killed her pets, and after a few days he thought the plants grew so fast that the insects could not catch them, and now he gets a barrel of soot from a round house, to use on his garden every week.

"The pretty yellow-striped bug that attacks our squashes and cucumbers has no affinity for soot or ashes, and soon leaves for other places, where it don't get such seasoning at its meals.

"Apply soot whenever the leaves of plants are moist; four or five dressings in a year are not too much. Soot and flour of sulphur in equal parts mixed in thin flour paste make a paint for all kind of trees that does no injury to them, but makes them grow as it washes off, and will keep insects and rabbits; mice, or other vermin from them if applied to the stems three or four times a year, and mildew will seldom be seen when this mixture is frequently used on vines or other things subject to it."

The Corn Cut-Worm.

Secretary Armstrong, of the Elmira Farmers' Club, gives in the Husbandman the following method of dealing with this pest:—

"There is really but one way to save the crop after the plants are once attacked by cut-worms—that is to dig the worms out and kill them. It is not a difficult task, nor is it very costly. I presume that a fourth part of the loss sustained would be the full equivalent of all the labor it would cost to dig up the cut-worms and kill them. The worm does the mischief at night, and before morning burrows in the ground near the spot where its depredations have been committed. A practical eye will readily discern the entrance to the hiding place, a small round hole into which the worm has passed and is concealed. The way to bring the pest up is to thrust a pointed knife down near the hole and lift out the earth to the depth of two or three inches, when the malefactor will lie exposed to view and can be instantly destroyed. I have known of large fields being cleared by this process at a cost of labor so slight as to bear no comparison with the loss that would otherwise have resulted."

PRIZE ESSAY.

Liquid Manure.

"For out of the old fields, as men saith, cometh all this new corn from year to year."—Chaucer.

Leakage, leaching and losing is about the run of this late age; well, perhaps we are a little too fast. There is another age that has not fully arrived at its perfection, that is, the drain-age.

Some grand old Coles, with ancient ideas, consider this latter the most important age. Farmers are receiving in these gratuitous days a good share of attention in the shape of advice, bordering on judicious strictures. The gold mine in the barnyard is a fertile theme of the agricultural neophyte, and is easier handled with the pen than the pitch-fork. Liquid manure in the state in which it is usually found, is not generally considered of sufficient importance to warrant even a moderate outlay of expense in its application as a special fertilizer. This subject has been so thoroughly discussed and ventilated by the press, that to clothe it in originality is a task as difficult as to avoid dipping into somebody else's stew. There is no disputing its value as an agent of fertility; that is fully admitted by farmers and gardeners; the latter especially are loud in its praise. Their custom of applying it to soil rich in decaying vegetable matter, and in which a vigorous vegetation is being sustained, renders its active properties more effective. The method of applying it in a fresh state is probably as good as any, at least it has the sanction of some practical men who have had large experience in the matter.

Liquid manure in a fresh state is not to be construed as such in a natural or recently formed condition; we have visible proof of its first active principles in retarding vegetation. It is not usually available in quantity sufficient to make it an object of special attention in its crude state, unless from large steadings fitted with necessary mechanical appliances for its preservation in a reservoir easy of access. Farmers whose operations are on a limited scale went go to the expense of special drains, tanks and water carts, with sundry necessary fixings that require additional intelligent labour to manipulate the machinery and to administer the slush; also, there is an uncertainty as to the strength of the solution applicable to the requirements of particular crops. Chemists are not always on hand to advise in these matters, and if they were the probability is that out of their laboratory they would be at sea in the solution. Could we determine the exact strength of the liquid suited to the crop we desire to fertilize, it would be all plain sailing. The application of liquid manure—on the best principles—is objected to by men of limited means on the ground of expense.

The next best plan probably is the manure port conveniently situated with regard to steading and of dimensions in proportion to stock. There are a few points in its construction not to be disregarded. The walls should be laid in lime mortar, with a drive way of sufficient width to allow free access and egress to a loaded cart. If the lay of the land is such as to admit of a through driveway it should be taken advantage of, as such a convenience greatly facilitates the labour; it obviates a great deal of "backing and filling." When liquid manure is required for a special purpose, advantage may be taken of falling weather to admit water from the roof in sufficient quantities to dilute the urine to any extent, so that it can be applied with safety to the growing crop or plants. The bottom should be substantial and permanently constructed with rubble stone of sufficient solidity to sustain heavy loads without breaking the surface. No danger may be apprehended from rats burrowing beneath or other cause of leakage, if care be taken in the construction.

At our annual agricultural fairs for several years, I noticed that one man always stood first on the prize list with several varieties of fruit, and as it was a privileged season for enquiring, I availed myself of the opportunity to ascertain the why and the wherefore of his success. Nothing particular was elicited, further than "the apples and pears would grow so." The spring following I visited his grounds and thought I discovered the secret of his success. There was nothing in his orchard at first sight to attract particular attention. The trees were not very young nor yet very old; a good many were out of balance, leaning promiscuously, indicating neglect in the first stage of their growth; a flock of sheep quietly cropping the young grass, and a pair of polled oxen with some young cattle

polishing the bodies of the trees filled in the picture. I enquired if it was his custom to allow animals among his trees; his reply was I thought significant: "I don't think what you see in here will do much harm." On closer inspection the ground in several places presented the appearance of water being thrown on it. Several trees were surrounded by low curbs, enclosing a space from 6 to 8 feet square. One of these curbs I noticed in particular; it was composed of narrow boards with three sides permanently secure, the other side by cleats and a couple of stakes at either end; the structure evidently was not intended as a fixture. He volunteered the remark, "it was some of the children's work; they must have something to amuse and keep them out of mischief." No doubt first rate employment for young ones and old ones too, whose business it was to give each tree a good drenching around the base. In connection with his steading was a capacious manure cellar, from which he drew large draughts of swash. His way of handling it was primitive and simple in the extreme. To the axle-tree of an ox cart, having the box removed, was a raised cask with a capacity of 80 gallons pivoted on two spars projecting behind. This piece of simplicity was backed into the cellar and expeditiously filled, a boy standing on a low staging dexterously handling a scoop similar to such as is used for grain. A close fitting cover, one half hinged, and a lever to control the discharge, was about the extent of this prehistoric system.

When full and the cover secured, it was taken to the orchard or field, upset, and the liquid left to find its own level. I considered his method of applying liquid manure about the "level best" thing out. To absorb urine and render it convenient to work with shovel and spade, good mold is sometimes used, and when thoroughly saturated and dried may be used to advantage. On farms where bog-earth or decomposed vegetable matter is to be had, it may be beneficially used as a ground tier of the port, provided it is prepared beforehand by exposure and drying. The port is supposed to be cleared of the contents twice a year, spring and fall; before dry earth is carted in, water may be let on in sufficient quantity to flood the floor to the depth of a few inches; in a week's time the water will be colored a light brown, and if desired may be used or left to be absorbed by the next coating of earth. The expediency of flowing the surface of the port with water may be questioned by some persons; but water is about as cheap and simple a substance for the purpose as black earth or any other bulky matter. One point in favor of water is that it acts at once, fixing the ammonia, and to a great extent dissolves the saline and mineral ingredients of the urine that have made their way to the floor, and otherwise would remain encrusted while the ammonia was in a great measure perfuming the air. Agriculturists generally have little, if any, knowledge of this complicated substance, and they don't evince much curiosity in the matter. They know that it is good for some plants, and they know practically that it does not contain all the essential elements necessary to the perfecting of vegetation.

A knowledge of the best mode of applying it with safety, to what soils, to what crops, and the best time of the year, are circumstances which render its use so troublesome in practice. That it is valuable as a fertilizer is a fact, that it should not be allowed to go to waste is another fact; but urine tanks, water butts and sundry fixings are not such excellent fixtures, as they are frequently represented to be.

Agriculture throughout the civilized world is yet in its infancy; half a century has glided away since science volunteered her unrestricted power to disclose the mysteries of husbandry. Folios of land literature have floated on the stream of time, primitive, scientific and plausible practice. The wooden-heads, the hard-heads and the leather-heads all have contributed their quota of information. Yet, after all this type sticking, how few out of the millions of grubbing bread winners are there that possess a knowledge of plant life, or in rustic elementary can brag of a knowledge beyond the dung hill. The farmer, to obtain means of livelihood from his ground, must look to the land itself, and in that sense cattle farming must be the integer. The acres are few and far between that can perfect the same order of plants in successive years; recourse must be had to the stock of the steading. All extraneous manures are an outgo, an expenditure of labour that could be more profitably employed in caring for and pro-

viding the byre with suitable accommodation and material to prevent leaching and evaporation.

Agriculture in its two-fold capacity, grain-growing and cattle farming, has always been the base of national prosperity. In regard to the preparation of barnyard manure for plant food, there are a variety of practices and opinions. Compost heaps are recommended as serviceable to absorb the liquid excretions of animals which are liable to be washed away. Composting induces fermentation and evolution, which, if allowed to proceed uncontrolled, renders the heap nearly worthless. The economy in composting stable manure is an open question. Some distinguished farmers are of the opinion that it is fussy, an effete practice, and should be dispensed with, the fertilizing properties of the heap being greatly impaired by fermentation. Fresh dung and caustic urine enter into present atmospheric union. To prevent loss by dispersion, plenty of dry earth or loam should be used in the cattle yards, the stable and the manure port. Unless care and attention is observed in the first stage of fermentation, a large portion of the ammonia contained and generated by the mass is dissipated and lost.

Practical horticulturists tell us that the liquid manure of animals, if rightly managed, is equal to the solid, that its action is more active, and that it contains a large amount of the salts so necessary to nutrition as well as the gaseous food of plants.

Liquid manure must always be subordinate to solid dung. Its exciting or stimulating effect is not permanent; although it may supply to a great extent the material out of which the plant is built, yet the application requires to be more frequent.

In horticulture and garden practice its application is simple, the effect prolific. In an orchard it may be distributed profusely, and a special application produces a marked effect on bloom, fruit and spray.

WM. HALIBURTON, Wolfville, Ont.

Corn Growing.

There is one important item in corn growing which is well known to be a fact by those who have tried it, but which is not so well known by those who have not practised the system, namely:—Planting a couple of kernels of good, sound seed in every other hill, twelve or fifteen days later than the first planting; or about the time the corn is up and at the first hoeing. The principle of it is that these late planted seeds make fresh vigorous stalks, which has been found very generally to fertilize or fructify the ears better and more fully than is often the case with only the first planting. Especially is this result obtained when there has been a drouth or a dry season to reduce or stunt the vigor of the early planted stalks, but has affected the later planting somewhat less. The writer has repeatedly seen very beneficial or marked results produced by his course, and he confidently believes it will be to the advantage of farmers to make a trial (even on a small scale, which cannot cost much,) of this plan with the crop of the present season. We have, in past years found the gains much more than the cost of doing it. Take a few rows in a field and make the experiment of planting two kernels in alternate hills at the time of first hoeing, and then carefully compare the results with other parts of the field.

Precautions Against Drouth.

High manuring, thorough cultivation, and the free use of vegetable matter like muck, are the best of precautions for preventing to a considerable extent, the bad effects of drouths. Messrs. Lawes and Gilbert, of England, in their experiments found that heavily manured soils retained to the depth of thirty-six inches many tons more water than adjoining lands not so heavily manured. And in experiments with the spade it was found that where the soil was dug up to the depth of eighteen inches, and heavily manured, the crop did not suffer from drouth, although the crops on adjoining plots were all but dried up. Lawes and Gilbert also found that when the manure was heavily applied, and turned under a good depth, the water did not go through to the drains near so rapidly as on land not so heavily manured or so deeply cultivated. In both cases, where there was a large percentage of vegetable matter in the soil it acted as a sponge, retaining much of the water which soils differently constituted allowed to pass through. Drouths we cannot prevent, and it behooves us to guard against their injurious effects to the best of our ability.

Stock.

THE FARMER'S ADVOCATE PRIZE

\$100.00

To be given annually by

WM. WELD, OF LONDON, ONT.

will be awarded for 1881, to "The Best Herd of Fat Cattle for Export."

This Prize will be offered at the Provincial Exhibition, to be held at London, Ont., commencing the 21st September, 1881.

CONDITIONS.

1.—The herd to consist of three animals, four years old or under, and must be at the time of exhibition, and for the previous six months, the bona-fide property of the exhibitor.

2. The herd may consist of animals of either sex or of both sexes.

3.—Pure-breds or Grades of any class may compete.

4.—Animals which may compete in any other class may compete for this prize.

5.—A statement of the breeding, mode of feeding, and weight of animals at the time of exhibition, must be given to the chairman of the judging committee before the animals can enter the show ring. An accurate account is desired, but if from any sufficient cause such cannot be given, an approximate estimate may be received by the judges. These statements will be the property of the FARMER'S ADVOCATE, and must be as full and concise as possible to be accepted.

6.—Special judges will be appointed by the Council of the Association to award this prize.

7.—The rules of the Association to govern all points, except as above noted. Entries can be made with the Secretary of the Association, up to Wednesday, the 21st of Sept.

Being desirous of encouraging the further development of our greatest resources, we offer the above prize, and hope to see strong competition for it, as it is one of the best ever offered at our Provincial for which the general farmer could compete. We have also introduced a new feature to Canadian agricultural exhibitions, viz., that embraced in condition "5." This need not debar any from exhibiting; any one who is capable of managing a farm successfully, is quite capable of fulfilling the above requirements, and if he has never made such subjects a source of study before, he will find them of much benefit. The winner of this prize may have, if he prefers, a SILVER CUP of equal value.

Next year we propose to give a similar prize for the best herd of dairy cows, irrespective of breed, particulars of which will be given in due time.

Special Prize to Township Exhibitions and Plowing Matches.

SIR,—In your June number I notice the magnificent prize you propose to give at the Provincial Exhibition for "a herd of fat cattle." Since you are so strong a believer in Township Exhibitions, will you not give a prize to them?

C. H. Whitby, P. O. Ont

[We offer to Township shows a larger and more valuable prize than that given by ourselves, or any one else, to the "Provincial," namely, a copy of the FARMER'S ADVOCATE for one year, as a special prize to each Township society, and to each plowing match in Canada, on application by their secretary.]

Calves and Cattle.

At this time of year when calves are dropping, and when grass farmers are stocking their pastures with purchased cattle, a timely word may be in season on one or two points connected with breeds and principles of management.

In regard to calves, in the first place, if they are intended to be pushed on rapidly so as to fatten them off at eighteen, twenty, or twenty-out in pastures during the best months, has been tried, and abandoned wherever the trial has been

made with two lots for the purpose of comparison. No doubt indoor life, or shed life—for the calves should always get plenty of air and sunshine—reduces the size of the lungs and liver as compared with the same organs of animals that lead active lives; but those defects will prove no drawback in their case; they will increase the propensity to fatten rapidly. On the other hand, breeding animals may easily be over-coddled and their constitution injured.

Another point about calves is that they ought not to lose their calf flesh rapidly, if at all—certainly not at all when they are intended for four months old, they should be kept under shedding from their birth. The plan of turning fattening at two or two and a half years old. We have often seen calves ill fed and injured in districts where neither the breed nor the system is first rate. We have frequently seen them half starved on poor pastures without corn, after weaning, and worth at eighteen months old little more than they were worth when the pinching began. Small farmers need not be indifferent stock farmers, but they very often are; and small farmers and ignorant or careless stock feeders lose annually large sums by mismanagement. Starving young things never pays. Cattle worth but \$25 at eighteen months cannot have paid for their keep. We have seen a certain sort of men hold up their hands with astonishment at oxen fattened from birth, and worth \$90 to \$100 at eighteen months. "What a lot they must have swallowed," they say; and the idea of imitating such a plan of feeding never enters their minds. Yet their own cattle, worth but \$25, would have paid them better if they too had never lost their calf flesh, and had been pushed on at a cost of \$1.00 a week, bringing, it may be, a little less at the present price of beef, but leaving two or three pounds each as the value of the dung. Such farmers have a very small "swallow" for science, and they are not aware of the value of the dung from different foods—that from cotton cake, is worth \$32 per ton; oil cake, \$22, beans, \$17, and so on.

Good stock farming axioms would be, "air and exercise for breeding animals," and fast "feeding and sunny sheds for young fattening bullocks." Sunshine and cheerful quarters aid digestion and improve the quality of young beef. A quiet disposition and gentle treatment also induce early maturity by promoting a habit of "masterly inactivity." How much may be lost by an ignoramus, by fast feeding such breeds as Texans, or hard-hided runts, instead of operating on Shorthorns and Herefords would be hard to say. Given a good breed and all the rest goes in at the mouth; but in grazing without much artificial feeding, the soil should suit the sort, nor should highly bred animals be put on poor land, or taken into bad pastures from those which are better.

"I occupied a farm that had been rented by our family for nearly half a century," says a Lammermuir sheep-farmer; and he goes on to relate that, when the Dishley sheep came into fashion, he cleared his farm of Cheviots in their favour; but on "our coarse lean pastures they gradually dwindled away." Some Leicesters were sold into Normandy with wool weighing ten pounds each ewe, fourteen pounds the ram. In six years the progeny clipped only three pounds of bad wool. Large sheep will do well on poor hills with plenty of corn and artificially provided forage, but Thomas Hale's rule still holds good as a general principle. He says of cattle of all kinds, "The larger kinds are bred where there is good nourishment, and they require the same where they are kept, or they will decline; the poorer and smaller kinds, which are used to hard fare, will thrive and fatten upon moderate land." It is with live stock as with trees—they do very poorly when transplanted from a rich into a poor soil. Good old Fitzherbert says, "And take heed where thou byeste any lean cattle or fat, and of whom, and where it was bred. For if thou byest out of a better ground than thou haste thy selfe, that cattel will not lyke with thee."

In order that "thy cattle" may like their quarters, it may be as well to breed them at home as far as may be possible; this plan has won favour in many districts where it was not deemed expedient, until our present system of artificial feeding and bringing early to maturity, came into fashion, the breeders having got the best of the bargain through the increased demand for their stock. But in breeding at home on an artificial system, it is worth while beginning with the best—in fact, only the best will pay the extra food and coddling.—[English Agricultural Gazette.

The Cost of Feeding Sheep.

The Massachusetts Ploughman, in reply to a correspondent, gives a detailed statement of the amount of hay, &c., consumed by a sheep, in an ordinary New England winter of five months. Such calculations by Canadian farmers would be very beneficial. Why should not every man know the proximate profit or loss in every branch of his business. A sheep will eat 3 per cent. of its live weight in good hay, or its equivalent daily. Giving then to each sheep, of small size, say 75 lbs., 1 1/2 lbs. of prime fine hay, which is 2 per cent. of its weight, amounting to 225 lbs. for 150 days of winter, which, allowing for the hay \$10 per ton, would be \$1.12 1/2. The other 1 per cent. should be made up of corn, whole or cracked; of this 1/2 a lb. should be fed daily, and would amount to 75 lbs., added to 225 lbs. of hay, making 300 lbs. of food consumed. The required amount of straw for bedding will make up the additional half per cent. The total expense would be hay, \$1.12 1/2; corn, 85cts; straw, 80cts; or \$2.87 1/2 for a winter of 150 days. If the winter be six months, or 180 days, requiring feeding, one-fifth of the above amount will have to be added, making \$3.45.

What's in a Color?

There is considerable discussion going the rounds now concerning the relative value of different colored animals of the same breed. All the evidence in so far goes to prove that the color of an animal has but little to do with its worth as a milk or beef-maker. It has been pretty clearly proven that the shade of an animal's coat has little or nothing to do with what is under the jacket, the whole thing being a matter of prejudice or fancy, which, by the way, we may parenthetically remark, is something very few practical breeders can afford in to indulge to any considerable extent. A breeder of means who has an established herd of thoroughbred animals is perfectly justified in pleasing his fancy in the matter of what colored animals he will retain as breeders. No one for a moment will hold that a herd of one colored cattle do not present a much better appearance to the eye than a lot including nearly all the colors peculiar to cattle—yet the color is not what the practical butcher looks at. He wants an animal that will cut up with the smallest waste, and since the color is no index to the killing quality of the beast, he pays no attention to it. However, "it's an ill wind that blows no one good," and while fine stock breeders are discriminating against the color, according to the standard they are working by, perhaps our more enterprising owners of large unimproved herds will avail themselves of the opportunity of getting an occasional fine individual animal at comparatively low rates on account of the "off color."

The Evil of Overstocking Pastures.

The overstocking of land is one of the surest and quickest ways of ruining pastures. It is an everyday thing with many farmers, who cannot be made to believe that they are getting the full benefit of a pasture unless the grass is eaten off a little faster than it has time to grow; consequently, all who put this method in practice always have bare pastures and poor cattle.

The advantages to be derived from allowing the grass to gain on the cattle during the growing season are many, some of which are the following: Cattle keep growing all the time come to maturity at the proper age. Animals keep constantly on bare pastures never mature properly; those kept on good pastures do not have to work day and night to satisfy a craving appetite, or use up all their food in building up a system continually worn down by labor and semi-starvation.

A good covering of grass is a protection to the land in warm weather and protects the young grass from the bad effects of cold dry weather between the rains of winter, so that new grass will be growing under a covering of the old, when that on bad ground will be sometimes literally starved to death. Old and new grass, when eaten together, is better for cattle than all new, while the seeding of the matured grasses keeps up the full variety of those kinds native to the soil. Consequently, pastures thus treated produce more food for stock during the year than those kept continually eaten down to the bare earth.

The Apiary.

Useful Hints for the Novice.

BY CHAS. F. DODD, CANANDAIGUA, N. Y.

We purpose to give in this article a few facts about bees, with which every bee-keeper should become familiar, and would do well to impress on his memory.

1st.—Bees gorged with honey never volunteer an attack.

2nd.—Bees may always be made peacable by inducing them to accept of liquid sweets.

3rd.—Bees, when frightened by smoke, or by drumming, fill themselves with honey and lose all disposition to sting, unless they are hurt.

4th.—Bees dislike any quick movements about their hives, especially any motion which jars their combs.

5th.—Bees dislike the offensive odor of sweaty animals, and will not endure impure air from human lungs. A bee-keeper should never use tobacco or liquor.

6th.—The bee-keeper will ordinarily derive all his profits from stocks strong and healthy in early spring.

7th.—In districts where forage is abundant only for a short period, the largest yield of honey will be secured by a moderate increase of stocks.

8th.—A moderate increase of colonies in any one season, will, in the long run, prove to be the easiest, safest, and cheapest mode of managing bees.

9th.—Queenless colonies, unless supplied with a queen, will dwindle away, or be destroyed by the bee moth or robber bees.

A. B. J., Vol. 1st.

Hiving Bees.

There are a great number of swarms lost every season because they are not properly hived. We would like to say a few words to the "Novice" on this subject, and if we can assist you in saving your bees, we will feel amply repaid for our trouble. In the first place, have everything ready before they swarm, place the hive where it is to stand, and if possible, have it shaded from the hot rays of the sun, if it is single boarded, but if it is double boarded you need not be particular. Now when the bees swarm, don't go to ringing bells, beating tin pans, blowing horns, &c., for bees are not particularly fond of music, (although the Italians have three bands) but as soon as they have all clustered, shake them into a box or tin pan (a boiler lid is handy) and carry them to the hive, and shake a few at the entrance; when they find their new home they will start a buzzing (termed the call) and all the rest will follow. If the entrance is small and the hive has a movable bottom, raise the hive up half an inch to let the bees pass in quickly, and if the weather is warm, ventilate the hive and shade it from the sun, for many new swarms are compelled to leave the hive on account of the oppressive heat. Queens are more easily introduced during the honey season, than at any other time. We can recommend the following, viz:—Comb Foundation, Honey Extractor, Movable Frame Hives, Italian Bees, Bee Smoker, Prof. Cook's Manual of the Apiary, and Gleanings in Bee Culture.

Heavy losses in lambs and young pigs, says the Pittsburg Stockman, are still reported from many points of the U.S.A. It seems difficult to account for this in the absence of any general epidemic, and in the face of the fact that matured stock is as a rule in an average healthy condition. This mortality among young breeding stock is sometimes the result of carelessness and neglect, though even the most careful stockmen have in some neighborhoods found their vigilance unavailing to prevent it.



CORRESPONDENCE.—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. 3. Do not expect anonymous communications to be noticed. 4. Mark letters "Printers Manuscript," leave open, and postage will be only 1c. per ½ ounce. We do not hold ourselves responsible for the views of correspondents.

NOTICE.

Our subscribers will confer a special favor by sending us an account of the crops in their respective townships or counties; if possible, give the outlook for each variety of farm crop.

SIR,—Will you kindly repeat the free copy of your valuable paper as a prize at our annual plowing matches? R. H. T., sec.-treas. Sherbrooke Plowmen's Association, Lennoxville, Que.

Certainly. The Farmer's Advocate and Home Magazine for one year will be given as a special prize to any plowing matches, on application by the Secretary. Ed. F. A.]

The Soiling System.

DISCUSSION ON THE SUBJECT BY THE AVONBANK FARMERS' CLUB, REPORTED BY OUR CORRESPONDENT.

The Avonbank farmers' club recently spent a very interesting and profitable evening in discussing the soiling system. The subject was opened by Mr. J. G. Jopling, who said that he considered the matter of soiling a very important one, and one that many farmers, particularly in the immediate neighborhood, did not give sufficient attention to. Whether it was wished to change the present system of farming or not, circumstances were forcing it. The uncertainty of spring crops for a number of years past made the sowing almost a forlorn hope, and the successive constant cropping was filling the land with thistles and weeds. And now that the main profits of the farms were produced from winter wheat, stock and dairying, it was only a simple matter of business detail to make the most of it. To grow wheat successfully and profitably it was necessary to feed the land by manuring and proper cultivation. To make money out of stock, equal care was needed in the management. In the State of New York many farmers were practicing soiling exclusively in preference to pasture. In Downie, however, he would not advocate more than a partial soiling system—a something to bridge over the hot summer season when the pastures failed. For soiling purposes the land should be selected near the buildings. One of the earliest kinds of green feed was winter rye, but he would not advise its use, as cattle did not like it at first, having to acquire the taste, and in a few days after being ready to cut the straw became hard and woody. A mixture of oats, barley and vetches would come in sufficiently early to be followed in rotation by a patch of clover, which in a moist season would cut two or three times, and the mainstay—corn. It was simply astonishing the amount of food one acre of corn well cultivated would produce. A patch of mangolds sown thickly was a great assistance in raising calves. They could be thinned and the bottom leaves taken off continually throughout the summer. There were other kinds of green food grown for soiling purposes, such as lucerne, &c., but the kinds mentioned were sufficient for all practical purposes. Where stables were close, ill ventilated, and not arranged for convenience in feeding, temporary sheds could be built with a roof to protect from sun and rain, and a passage in front to feed from. Feed thrown in pasture fields for cattle to trample on was very wasteful. Mr. Jopling cited a number of cases that had come under his observation—one of a Mr. Eddy, of Haldimand township, who for two successive years, with a plot of three acres sown with oats, peas and vetches, and corn, with five acres of pasture and a small piece of bush, kept a herd of seventeen cows till the harvest was off, making the highest average of milk produced by any dairy in a cheese factory of 700 cows. No

doubt it took work, but it was labor that would pay. Besides the direct benefit, each additional well kept animal a farmer keeps added to the manure pile, which in turn would grow wheat.

Mr. Thos. Steele followed, giving his own experience for a number of years, showing the many advantages of soiling. Two acres of green feed would save ten acres of pasture, the rent of which in itself would repay the labor. His practice was to haul in the barn sufficient fodder each evening to feed night and morning. A cart or a rack fastened on a stone boat answered the purpose. He also, for a portion of each summer, fed his horses by cutting grass instead of pasturing. He closed by making an earnest appeal to those present who said they had no experience, to at least make a trial.

Mr. Duncan Graham said in regard to the labor, that it usually employed one person and frequently more on an ordinary farm to attend the cattle and bring them through the winter. If that paid, it would certainly pay to spend the two or three hours each day needed in soiling, if the advantages were equal to what had been shown. It certainly did not pay to pasture cattle on good improved land, seeded with timothy and clover.

WINE FROM GRAPES.

(Continued from last issue.)

I asked many questions about the grape crop of 1848, as I had heard so much about it—so much longing for the good time to come again; and as my friend had, as I may say, been born in a vineyard (his father had held the same responsible position he now held). What I learned from him was that it was only once in about ten years that the grape crop was good, and that 1841 was the last good year they had had. Some years, he told me, things would be looking everything one could wish—the crop large, and that perhaps a wet, cold fall would set in and all their hopes would be blasted, as the grapes would not mature right, and as I had learned before, the wine would be inferior in quality. You can not make good wine unless the grapes are fully ripe. I told him I thought the grapes he was then pressing were fully ripe; but he assured me they were not, and when we were together he showed and explained fully the difference between a ripe grape and one imperfectly so. I learned that one of my friend's perquisites was the refuse or husks after the juice had been pressed out of the grapes; this he fermented and distilled into what he called brandy, of which he gave me a taste, and I could find no difference between the taste of it and any pure high wines made from corn in America. But, nevertheless, this is what the best, and I may say, the only genuine brandy is made from; and he assured me that of the very stuff I had tasted he could, by adding a little burnt sugar, etc., make as good brandy as I could find in France, and that in olden times they knew of no other way of making brandy. Now, some of our Canadian high wines finds its way to France and comes back to us mixed up in our champagne and other wines, and in brandy also. Some will say, "where's the difference? it's all alcohol." I say, if we can make one part of the wine or brandy, why not the other part? Our climate is better than theirs for producing the other part, and why not do it?

After spending between two and three years in Rheims, I took a trip southwards, and on my way found the hills generally clad with vines. In a great many parts of the south I found the vines on trellises, and in many places left on the trellis all winter. In the champagne district the vines are pruned close in the fall, and are cut loose from the stakes and laid on the ground in hope of a cold winter with plenty of snow. My friend at Selery, and others, told me that a hard winter they found to be the best for the grape vines. I stayed some time in a small town called Bourgoyne, south of Lyons, where a splendid wine is made, called Beau Jo. I also spent some little time south of Bourgoyne, in a town or village called La Tour du Pin, and whilst in this district I saw one day in my wanderings a person driving a large donkey with two large baskets slung across its back, filled with earth. The person driving the donkey was carrying a small shovel and a bundle of grape vines, and as this was rather an unusual occurrence, I followed the person. He went up the side of a mountain, where I found he had previously built what is called a blind wall of the loose stones that were found on the side of the mountain. Behind this wall he planted his vines, and where he could not find sufficient earth to cover the roots, he took some from the baskets on the donkey's back. The person told me that

grapes did better in such places than in any where else you like to plant them, and particularly if the rocks were limestone. I was told that the vine made better wine where grown on limestone than any other food. He said that in a few years his wall behind would be level to the top with leaves and such like rolling off the mountain top.

I think, Mr. Editor, I have written quite as much of what I have seen of grape-growing in France as you or your subscribers will care to read. I will therefore leave France, and would ask those of your subscribers who have grown even such grapes as the Clinton for the last 30 years, how often in that time they have failed to get a fair crop. If they speak the truth, I think they will one and all say, after thinking the matter over well, that the summer of 1860 was a bad year, and they will have to drop from 1860 clear down to 1878, and I will also give in 1879. This makes three times, and for their information I beg to say that had they planted the Clinton vine in the most favored part of France, and lived there for thirty years, they would have found that instead of three failures, every year would have been a failure, for they never could have matured the grapes sufficiently to make a wine fit to drink. This may be rather hard for those who have large vineyards of that vine, and it may also be hard for the nurseryman who is still trying to sell the old Clinton, but it is nevertheless true. I had a person call on me once to see if I could teach him how to make the wine keep. He always had good crops, he said, and he could always make abundance of wine, but it would not keep unless he put alcohol into it, and sugar, or the people found fault with the sourness; and when I tasted it I found it a wine that neither alcohol nor sugar would make fit to drink. There was a thinness about it that no amount of doctoring could cure (like the wine in France in a very bad year). This man grew the Clinton only. I told him he would have to try some other variety of grapes before he would succeed in making a good wine. I also told him that the matter of putting in sugar and alcohol was nothing, providing, when done, he produced a good wine. I would now ask why the south and south-east sides of all the hills from the Georgian Bay east as far as the Ottawa River are not clad with such vines as the Delaware, the Champion and a number of other early ripening varieties. I would also like to ask why we are not a wine-drinking people, instead of a whisky-drinking people. Wine, I am certain, can be produced in this country for less money than beer. To produce wine from the grapes there is not so much labor as there is in producing beer from barley and hops, and I am certain also that there is not as much labor in producing the grapes as there is in producing barley and hops. Had Ontario been settled by French instead of English, we would be drinking our wine instead of the worst of all liquors, whisky. A number of people think we cannot produce wine to any extent; there are, they say, a few favored spots in Ontario where we can produce a little. But I would like to tell these gentlemen that as good wine can be made in Ontario with the grapes we have as was ever made in France, but we cannot do so with the Clinton, although I have drunk very fair wine made from the Clinton grapes, grown in Toronto. I have drunk wine made in Hamilton that I thought equal to the best I ever tasted in France, but the grapes it was made from I do not know. The only difficulty about wine-making is getting the grapes fully ripe, and that difficulty is overcome when we plant such varieties as the Champion, Moore's Early and Delaware. These and all other early varieties should be left on the vines until the first week in October; if this is done, and the vines are planted on the hill sides, as in France, I will guarantee as good—yes, better wine than can be made in France nine years out of ten, for, as I have stated, it was only one year in ten that the grape matured in France sufficiently to make good wine. The years the grapes do not mature it is only with the greatest amount of skill in doctoring and mixing that a wine is made that any one would care to drink.

To see the hills clad with vines would not, I suppose, be a pleasing sight to our teetotal friends, but I would ask them to compare a barley field and a hop garden to a vineyard. I would also ask them to compare (if they can) a wine drinker to a whisky drinker, or even a beer drinker. And I would like to tell some of them that if half the money and speaking talent that has been expended had been spent in educating the people in the knowledge of grape-growing and wine-making, and in getting the rulers of the country to keep the

kinds, the money and talent would, in my humble opinion, have been better spent and more good would have been the result. G. M., Perth.

THE PROVINCIAL EXHIBITION.

SIR,—The remarks comprised in your June issue respecting the accommodation, or rather want of accommodation, afforded visitors at the Provincial Exhibitions are exceedingly apropos. I very rarely fail to attend these exhibitions in some official capacity, and I have scarcely ever succeeded in obtaining moderately comfortable accommodation. On the last occasion of the Exhibition being held in London I had written to a friend, occupying a prominent position in the city, requesting him to secure a room for me at the principal hotel. He assured me, by return mail, that he had done so, and on my arrival the night before the exhibition was opened he met me at the station with a cab and accompanied me to the hotel. To my utter astonishment and dismay we were coolly informed by the clerk that he had made up his mind to keep no room for anyone, that it was a case of "first come first served," and that, although he acknowledged the room had been engaged three or four weeks beforehand, he had assigned it to a previous arrival. Fortunately for me my friend was able to give me a bed or I might have been included in the number of those unfortunates who, to my certain knowledge, had to pace the streets all night, with the pleasant alternative of sitting on door-steps. Now, this was one, perhaps the chief, reason why, a few years ago, I moved a resolution at the annual meeting of the Association to the effect that it was desirable that in future the exhibitions should be permanently established in Toronto, where alone adequate accommodation can be secured. My resolution was voted down, but unless something is done to furnish decent sleeping accommodation for visitors in other places it will come to that system of centralization at last. I really look forward with a feeling of dread to the next exhibition, which I shall have to attend in connection with the annual meeting of different organizations, because, although I shall once more endeavor to secure a room beforehand, I shall, after past experience, arrive in London in a state of uncertainty as to the spot, if any, on which I may lay my head at night. B. A., Peterboro', Ont.

GOVERNMENT PRIZE FARMS.

SIR,—As the season is approaching when the judges on farms for western sections of Ontario will be going the rounds and taking a glance at the different farms competing for the gold, silver or bronze medals, would it not be well for you to advocate that good, practical farmers, such as understand making a farm pay, be selected as judges, as it is one thing to farm nice and the profit and more to go every year until the farm is lost, and it is another thing to make a farm pay or show a profit; that is what I contend is good farming. No business is a good business unless it pays, and the same with a farmer. If he is a good one, his farm will be a paying one. Now, it is said that the farm that obtained the silver medal last year does not pay expenses, neither has it for a number of years; also, it is generally reported that some of the best farms competing were not examined, only a glance at them from the road, as the owners were real workmen, and did not put on sufficient style to suit the judges in their opinion of what should be model farmers; or if not, those judges must be extra smart in their judging capacities when they could examine into stock and farm of from two to four hundred acres in the short time of one-half hour. They should certainly be appointed again this present year, and probably will. If they are it would be well for them to go over the whole of the farm and just see how the back part is. It might be very nice along the road and around lanes, the implements, etc., clean and nice, a nice house, nice kept lawn, plenty of good wine in the cellar and some nice cigars for a smoke after dinner, and after all this should they go over and give a thorough inspection it might be that on certain portions of said farm there might be growing an extra crop of thistles, rag weed, etc., as it is reported concerning one of the prize farms of last year. But then it may be this way:—One of the men competing said that the judges said to him it made no difference if a portion of the farm was farmed nicely if the other portion remained in a swamp. Now, if this is the kind of men appointed as judges in a matter of this kind, we want none of them nor their judging. For instance, almost any farmer could fit up a piece of a two hun-

dred acre farm, say fifty acres of it, have it rich by putting all his manure on it and starving the balance; also, keep it very slick and nice. He could also drive out with a nice rig, kid gloves and smoke a cigar and still he would not be really a second-class farmer. In the judges report they tell us of the cutter, the waggonettes, the college education of the children, and the nice daughters. This is all nice and right for nice things and nice accomplishments, but what has that got to do with a prize farm? I really wonder if those judges were young unmarried men; if not, there certainly must have been a widower in the crowd. Now, Mr. Editor, you can do what you like with this; you can either burn it or give it a place in the ADVOCATE. OXFORD.

SIR,—As a subscriber to your journal I (together, doubtless, with many others) have received much valuable information from your editorial remarks, as well as the written experience of others. Perhaps, therefore, my experience in a small way may be beneficial to others. There has been a general complaint this year that corn has been in many cases a failure—even after twice planting. I can account for it, I think, in this way:—Farmers, of course, generally pick out the best ears of corn to preserve for planting, and put them in a dry place for the winter, but they overlook the fact that a ear of corn is thick and contains a great deal of moisture, even when it appears quite dry. Now, my plan to preserve corn for seed is to break it short off at the butt of the cobb, and with a large gimlet to bore a hole from the thick to the thin end, about three inches up the cobb, taking out all the pith, and leaving the hollow. The effect is this:—That the severe frost of winter will do no damage to the germ of the corn, as the bored part of the cobb will soon dry, and be proof against the frost (even such a winter as the past one), and the pith being removed, the whole becomes perfectly dry, and will stand any amount of frost without harm to the seed. My experience, it is true, is not on a large scale this year, being only about 1½ acres, but the corn I planted was saved in the way I speak of, and I believe every seed has germinated and looks well. I may add, that the land is light, and not having sufficient manure for all my crops, with each hill of corn I put about a desert spoonful of superphosphate. The effect so far appears to be good, as the corn stands about 10 inches high, and was planted on the 23rd of May. I will also say for the benefit of those who do not work much land, that with each hill of corn I planted white beans, as I have often done before, and they always do well, and two crops are gathered from the one piece of land. If this experience (which is practical) should prove beneficial to others in the future, I shall be glad. H. I., London, Ont.

MY EXPERIENCE IN CANNING FRUIT.

Mrs. G. F. Nelson, writing to Purdy's Fruit Recorder, says:—Please allow me some little corner in your paper to give a little of my experience on canning fruit.

We have ten acres of fruit of all kinds, and I take a great deal of pride in canning fruit. I get nearly all the prizes at the fairs. I wish you could just peep into my cellar to see my tomatoes and peaches, some canned last fall, and some a year ago, not mentioning my other fruit. I will tell you how I can my tomatoes, both red and yellow. I pick the apple tomatoes—the smoothest and best shaped—and scald and skin them very carefully; take the stem out with a pen knife, taking care not to cut the tomato so as to let the juice or seeds run out; then I place them in jars, some of them with the stem end next to the jar and some with the blossom ends; than I take the juice that has run out of some that I have had peeled to cook, having no seeds nor pulp, and add a little salt, and pour on my whole tomatoes until nearly full, then place them in a kettle of cold water and let them cook till I think they are hot clear through; then I seal them. I use nothing but glass two quart jars; after the cover has been on about five minutes I take it off so they will settle, letting the gas out; then I fill up with juice and seal again, and my cans are always full to the cover. A great many have not learned this. You have no idea how nice they will look through the glass; they show every vein and rib and look as if they were put up raw, and when used they are just as if they had been taken from the vines; if you don't believe me try it this summer. I always keep my fruit in the dark and it don't fade through the

Now I will tell you how I can peaches and pears. I get them as near of a size as I can, and sound, but ripe, and peel them, dropping them into cold water as fast as I peel, having my cans all ready; than I fill the jars with fruit, and to every two quart can I melt one-half pound white sugar with enough water to cover the fruit, and pour it on, setting them in my boiler, which holds eight cans; as soon as they are heated through I take them out, having syrup ready to fill up, than I seal as with tomatoes, and if you can make fruit look any nicer and taste more natural, will someone tell the ADVOCATE how.

GRAFTING OLD ORCHARDS.

C. J. Kars, of King's Co., N. B., asks in a recent number of the ADVOCATE how to graft old apple trees, and if it pays best to graft them or take them out and replace them with young trees grafted in the nursery. There can be no comparison drawn between the advisability of grafting old trees or replacing them with young ones, provided they are healthy and a good job of work can be done, but great care should be exercised in securing the services of a proficient workman the whole country abounds with imposters, men who claim to know all about grafting, but literally know nothing of the requirements of a fruit tree. Grafts put upon old trees come into bearing about the third year after grafting, thus making the orchard a source of revenue almost from the starting-point, yielding fine large crops for many years before young trees would be large enough to bear in paying quantities. The first thing to ascertain is whether the tree or trees in question are in a state of good health; the presence of disease sometimes manifests itself by too great an abundance of loose shelly bark, and perhaps moss and bark-lice on the limbs, and in sawing off a limb much dark-colored wood is found; it is safe to conclude that death has begun its work; and it will sooner or later claim the victory, but trees may be somewhat diseased and yet made to pay the expense of grafting, as it seems to impart to old trees new life and vigor. Old trees should invariably be grafted in limbs out quite a distance from the trunk, so that when your grafts grow and the other wood is cut away your tree is nearly its original size; saw all stubs nearly the same length from the point where the branches all start out from the trunk of the tree; this gives the tree after the grafts grow and the other wood is cut away a uniform and symmetrical appearance. From $1\frac{1}{2}$ to $2\frac{1}{2}$ inches in diameter are the best sized stubs to graft in; split the stalk directly across the centre a distance of from $2\frac{1}{2}$ to 4 inches, according to strength of stalk, drive in a wedge to keep it open while inserting the graft, begin about $\frac{1}{4}$ inch below a good bud, whittle the graft wedge shape, leaving the edge on which the first bud is a little thickest only a little, making the wedge from $1\frac{1}{2}$ to 2 inches in length; don't whittle the graft to a thin point, but leave it about the same thickness that it would be at that point provided it was long enough to reach the bottom of the split in the stalk, thus giving an equal bearing at all points, which forms a more secure connection. Always be careful to have the bark of the graft connect nicely with the inside bark of the stalk—the bark on old trees is usually quite thick—leave two buds on each graft, put a graft in each side of the stub, and when they have grown together and quite cover the end of the stub, saw one off; if this is not done there is danger of their splitting apart; exclude the air when grafting by covering well with grafting wax.

Young grafts should be watched very closely the first year or two; their future usefulness and success may be very much impaired through neglect. A close application of good intelligent treatment pays well. Young sprouts that may start out at the end of the stub near the graft should be taken off as fast as they make their appearance; if this is not done they are liable to become so numerous and strong as to rob the graft of its due amount of nourishment, thereby enfeebling its growth and bringing on premature disease, from which it may never recover. I unhesitatingly affirm that a full grafted top in prime bearing condition can be secured in three years, if any thing like good treatment be given. I regard it as highly advisable to graft all that is needed in the orchard at once, as it incurs less time, trouble and expense, than if made to cover a number of years in doing the work, besides getting their immediate growth.

The best, strongest and most suitable graft for forming a top should be selected on each stub; give it all the room it needs; allow branches to grow over it to shade it, and keep the other one cut back just short enough to give the best graft every

chance to spread and make development, and when they have grown quite together cover the end of the stub, saw the weakest one off—two should never be allowed to remain permanently, as the connection they make with each other is imperfect, leaving them liable to split down from weight of fruit, snow, heavy winds or other causes. The other wood should be cut away as fast as you think the grafts are able to receive the sap. They should be kept well pruned so as to permit the air to pass through freely; this should be done for the health and vigor of the graft and to render it less liable of being blown out of its place before a perfect and secure connection is formed. It is very trying on them to be left thick enough to catch all the wind.

H. C. H., Owen Sound, Ont.

SIR,—The orchard grass pleases me very much. It is a wonderful grower, and starts so early in the season. I intend laying down about ten acres with it and several other kinds this fall for a permanent pasture. I noticed your offer of \$100 for best three fat cattle for shipment to England, etc. Now it strikes me that your conditions might be improved a little so as to more effectually accomplish the object aimed at, viz., to encourage the production of better animals of that class. Had you limited the offer to the breeders and feeders, i. e., the animals to have been both bred and fed by the exhibitor, it would, in the estimation of many hereabouts, have been better; because as it now stands it permits the drover or capitalist to compete on even footing with the producer, which is scarcely a fair basis, since the drover is constantly picking up the very best all over the country. As it now stands it is practically a prize for drovers. This, I am confident you have not intended. On the contrary, I believe you were led to word the conditions in the manner you have to avoid any appearance of narrowness. Yet I think that upon reflection you will agree with me that the prize would prove far more beneficial to the cause you set out to promote by limiting it to the breeder and feeder of the animals. My boys wish me to ask if calves of 1881 would be eligible to compete, though less than six months old. We had a very severe frost here last night (22nd of June). Corn is very small and puny. I do not know when it has been so backward at this season. Wheat is doing very well if not damaged by the frost. I have sold part of my wool here at the house for 35c. per lb. This will be a poser for the hemp growers (Longwools). But it only illustrates what the ADVOCATE has always contended for, viz., that quality will tell every time. Shorthorns and Ayrshires doing nobly. Pigs and sheep eclipsing those of former years. An immense revolution here in regard to stock-breeding. More cows have been served by my thorough-bred bull up to this date than during any former season, and still they come four and five a day. I shall require to keep two or three bulls next season at the present rate of increase over former years. The cheese business here is not much thought of, and had the people here stuck to the improvement of the beef quality of their animals instead of rushing into whey rennets, it would have been infinitely to their advantage now. It is bad policy to let go what is paying well for that which we have no certainty will do better. E. J. Y., Wardsville P.O.

[By closely reading the conditions of our prize you will find that a drover will not be able to comply with them. It is as we intended it to be, a prize for the farmers. The age of your calves will not prevent them from competing.]

SIR,—A great many people complain about the late frosts we have had. Some tell me it cut down all this year's growth on their grape vines. I have a good collection of grapes; they were doing fine, and I was pleased to find the frost had done them no harm—not even the young "Moore's Early" you sent me. It had a shoot about a foot long, but it was not the least injured. I prize it and the Brighton above all the grapes I have. The Moore's Early I prize for what I have read about it, but the Brighton I have fruited and found it first-class, and I give it no protection in winter but what the snow does for it. I just lay them on the ground and put sticks or stones, or anything to keep the wind from dashing them about. Winter before last we had scarcely any snow all winter, and my vines came out all right. I know no one but myself down here that does not make a great fuss about covering their grapes in winter with boards, and some cover them with earth. Some ten years ago I had plenty of time in the fall and I covered my vines as my neighbors did, and I found them

nearly dead when spring came. Never but that once have I done anything more than I have stated above. I learned this lesson quite by accident. A friend of mine had a few vines (White Sweet Water), and the boys stole his grapes in the fall, so he gave the vines up to be frozen. He left them on the trellis all winter, and to his and my astonishment, they were not the least injured when spring came, and they bore a splendid crop of grapes that year. The freezing did not even prevent the boys from stealing them again.

G. M., Perth.

SIR,—I cut and weighed one hill prickly comfrey this morning (June 13th); weight, $14\frac{1}{2}$ lbs.; taking seven thousand plants to the acre (not "seven hundred," as you make me say in my last), the yield would be over fifty tons to the acre of green feed. On the 12th of May I cut at the rate of 15 4-5, and on the 30th May at the rate of 35, and now (June 13) at the rate of fifty tons to the acre. I have plants at this date of second growth three feet high, and am feeding it daily. I left the plants during winter without any artificial covering and lost none of them.

A. E., Newbury.

SIR,—Can you tell me any remedy for a lump that comes in a cow's teat about half way up on the inside and prevents the milk coming out. I have used a needle with very good results, but it is as bad next milking time; there is also a hard substance from the lump down the centre of the teat nearly to the point, about the size of a lead pencil.

A. H., Cathcart.

[Your best plan would be to procure a proper teat-syphon and pass it up the teat at each milking until the lump wastes away. Keep the teat well softened by fomenting with hot water, and apply some goose oil afterwards once or twice a day.]

W. L., Salford, Ont., wants to know what causes a hard formation like gristle in cows' teats and how can it be removed. Sometimes one teat and sometimes all are affected. First noticed when milking commences after calving. Sometimes milk turns watery and bloody for a few days, also the cows appear dull and lifeless. Gave sulphur and saltpetre and they recovered in a few days.

[Generally caused by cold, from lying on cold ground or damp floor, sometimes from a hurt. Some recommend an operation by removing it with the knife, but I find this ends oftener in harm than good. If they are bad and cause much trouble in milking, the best and safest plan is to let them dry as soon as possible and make beef of them, if they are not bad you might continue milking them, applying the treatment recommended to A. H., in this issue.]

SIR,—Our plum trees are this year, as in fact they usually are, loaded with blossoms, but they never succeed in coming to maturity. Can you tell me of any certain remedy for destroying the insect, or whatever may be the cause of what has already become an annual occurrence?

G. W. T., Grovesend, Ont.

[The most effectual remedy for destroying the curculio, that is so destructive to growing plums, is jarring the tree when the fruit is forming. This should be done every morning for some time—till the fruit is fully formed, and all the plums that have the insect in them have fallen. A sheet must be spread under the tree, and the stung plums which fall on it from the jarring are to be gathered and destroyed. Other remedies, such as bands around the stems of trees, paris green, &c., have been recommended by some, all of which have from time to time been referred to in the ADVOCATE.]

SIR,—The weather is cold, wet and backward. Grain is looking well, but all root crops and early vegetables are late. We had a heavy frost June 7th that injured corn, beans and like crops.

T. B. C., Yarmouth, N.S.

SIR,—Fall wheat in this part of the country is very poor—not over one-half a crop. The hay crop also is very poor, having been injured by the frost. The spring grain looks fair though suffering from drought.

J. T., Walter's Falls, Ont.

SIR,—We have had very bad weather for putting in crops—so much wet and cold. On the 16th of June it snowed, hailed and almost froze. It is now very fine. Crops are pretty much all in, and what are up look very well. Potato bugs are plenty, taking the potatoes as fast as they come up.

M. R., Douglass, Ont.



The Family Circle.

"Home, Sweet Home."

A Boating Adventure.

Mr. Percy Waring was going out to spend the evening, and having completed his toilet, was standing in front of his mirror admiring himself. The face was rather a pleasant one—broad forehead, brown hair parted nearly in the middle, straight nose, and a smiling mouth under a delicate mustache. Mr. Waring contemplated the mustache with an expression of satisfaction, but looking more intently, observed two unobtainable gray hairs in it, and went and lit a cigar, and sat down in an easy-chair, to face the melancholy fact that he was no longer a young fellow. Nobody has told him so, it was true, and he was still one of the brightest stars of society, he reflected; but there were the two gray hairs, and the sight of them was depressing. He had recently had other sources of mental depression. He had lost heavily at the races, where he had backed the wrong horses, and had been compelled to part with a considerable slice out of his bank stock. This had caused Mr. Waring to fall into reflection. He wanted money, and the question was becoming serious how to supply the deficit. After mature consideration, he thought that to marry an heiress would be the best thing. He had selected the person in question, made gratifying progress, and now, just as he was going to spend the evening with her, he had caught sight of those two unlucky gray hairs, which reminded him of the terrible fact that he was forty.

That was annoying. His cousin, Judge Alleyn, was a man of business, who never summoned people unless it was necessary, and he must go. But he would return in three days, and resume his matrimonial campaign with vigor. Then he opened the second letter, which was dated on the day after the first. It was in a girl's hand and said: "I think you might come and see me as well as to sign papa's law papers. Please come; I am pining for you, and looking out all day long for the boat. I hope you haven't forgotten." "Your (fond) JEAN."

was the silver glimmer of it on Miss Jean's roes. What was the matter? Mr. Percy Waring asked himself. Had she noticed the unlucky gray hairs, and did she regard him as her grandpa? Or, finding that her sentiments were not in sympathy with the views of Mr. Waring, had she determined to spare him pain by nipping his young romance in the bud? It seemed so, since there was the frost. Thence melancholy on Mr. Waring's part. He determined to go away at once, and as duty did not go away. He conducted himself very much like other male human beings in his state of mind. If Jean smiled, and said something which meant nothing, his pulse throbbed; and so affairs continued until the last days of October—Mr. Percy Waring having resolved to go away at least ten times, and having remained. This was very unprofitable indeed. There was a certain enjoyment in it, but that it was unsatisfactory. The best thing to do would be to tell Jean that he was dying for her, and have the matter end in some way—and Mr. Waring was laboriously composing a little impromptu speech for the occasion, when an unexpected addition was made to the family circle at The Reeds.

of exciting sentiment in the tender heart of Miss Jean, this performance seemed to arouse in her the wildest mirth.

Meantime Mr. Waring was reflecting upon a business matter. Miss Jean Alleyn wore a ring of his. He had given it to her one day, telling her to wear it "until she was tired of him"; then, as soon as "she did not wish to have him love her any more," she could return it. That would make it unnecessary to have a scene.

"It would be better if she returned it," muttered Mr. Waring, in extreme collapse.

"Turn her!" a voice exclaimed. "You never sailed a boat, Count. The wind would keel her over in ten seconds."

It was the voice of Charley Walton, and looking at him, Mr. Waring saw that he was laughing. So was Miss Jean Alleyn, for that matter; but then she had been laughing ever since she left The Reeds.

"Don't you see we are going to have a stunner, Count? Look out, or you'll be blown into the water."

In fact, a sudden squall had struck them, and the small sail-boat was running before the wind like a race-horse. There was a little island just in front of them, at the mouth of the cove, and Charley Walton was trying to avoid it by bearing down hard on the helm. As to Miss Jean, she was delighted. She leaning over the boat's side, and dipped her hands in the foam, and seemed trying to make up her mind whether she could throw some at Mr. Waring without impropriety.

"I never thought there would be a squall," exclaimed Charley Walton; "and suppose we all go to the bottom, Count? I'm at the helm, so you'll have to take Miss Jean in your arms and swim to shore with her."

"I will do so with pleasure," said Mr. Waring, with a look of mournful devotion.

He then leaned over to Miss Jean Alleyn, and said sotto voce, "That is a handsome ring you wear." The ring was on a finger of the small hand resting on the side of the boat. Mr. Waring took the hand, and drew the ring half from the maiden's finger. Then he stopped, and looked her straight in the eyes. "Shall I?" he said, drawing the ring a little further.

It was a very curious expression which came to the face of the maiden. Did she blush and hesitate? Perhaps the wind brought the sudden color to her face. Certainly it was the cause of the burst of laughter which suddenly escaped from Miss Jean's lips. A furious gust had blown off her chip hat, and carried it dancing over the foam crests. And so quick had been the clutch of the ungallant wind-fingers that they tore down her hair too. The brown curls fell on her shoulders, and made a frame for the rosy cheeks; and looking straight into the face which was not more than two feet from him, Mr. Waring uttered a sigh which would have melted tigers.

He was still holding the hand, and making pretence to draw off the ring—that small circle of gold which she was to "return when she was tired of him, and did not wish to have him love her any more"—when suddenly the maiden frowned, and drew her hand away abruptly.

"Please let my property alone, sir," she said. But Mr. Percy Waring still held the hand, and did not release the ring. It was injudicious, for Miss Jean suddenly colored. "If you insist, there it is, sir," she said, her eyes flashing through quick tears.

But Mr. Percy Waring was lucky that day. He did not suffer from his blunder. What Charley Walton predicted in jest, took place in earnest.

"Look out, Count!" he now exclaimed. "The wind has shifted. Take care, Miss Jean!"

It was too late to take care. The sailing boat was struck by a furious squall, and turned over. When Jean rose to the surface of the water, she found herself in the close embrace of Mr. Percy Waring, who swam fifty yards with her, then he touched ground, and carried her bodily to the little island.

Charley Walton landed near them, and seeing that the danger was over, began to laugh.

"Was ever such luck!" he cried; "but at all events the Count has rescued you, Miss Jean. I wish I could do the same for my poor sail-boat."

A little fishing-canoe was tethered to a tree near, and he ran and unlocked it.

"Take care of yourself, Count," he cried, laughing. "I'm going to tug in my craft."

The canoe shot from the bank, and Mr. Waring turned toward his companion. Her dress was streaming with water, and clung close to her person. Two small feet emerged from the skirt, and Mr. Waring contemplated them.

Suddenly a long shrill note came on the wind from The Reeds landing. The steamboat, which had stopped there, was about to resume her way, and would pass the island. At the same moment a loud halloo came from Charley Walton, who was tugging in his sail-boat.

"I must go," said Mr. Percy Waring. "Charley will be here in a moment, and will take charge of you."

Jean looked up at him, and laughed and blushed.

"You are so beautiful!" said Mr. Percy Waring.

"I'm such a fright! and the water is trickling down my nose."

"Don't mind it. Good-bye, Jean. There is the boat," said Mr. Waring. He took her hand and was drawing off the ring, when she closed her finger on it.

"Don't play with me, Jean—I love you so! whether the water is trickling down your nose or not," said Mr. Waring.

He drew his white handkerchief and said

"There is Charley. Here goes for the signal. The steamer will send a boat for me."

Suddenly Jean raised her hand and caught the arm which was just making the signal. It was done so quickly and with such energy that an accident happened to Miss Jean Alleyn. Her boots were muddy, and she slipped. The consequence was that if Mr. Percy Waring had not caught her, she would have fallen. He did so with great promptness, and held her close to his breast—in which graceful attitude they were found by Mr. Charley Walton. A burst of laughter announced his vicinity, and he always said afterward that he had head something. It was not much, but it meant a good deal, it seemed. It was, "No, don't go!" uttered in a whisper; and the whisper came from Miss Jean Alleyn.

WHEN TO EAT FRUIT.—The proper time of eating fruit of every description is half an hour before breakfast and dinner; and if in their ripe, raw, natural and fresh state, the acid their juices contain, and which is their healthful quality, is at once absorbed and carried in its strength into the circulation.—[Cottage Cookery Book.]

Ornithological Notes.

BY ORNIS.

Now, when most of our birds are singing less and less all the time, the song of the Wren (*Troglodytes aedon*) becomes quite noticeable, and on seeing the bird, a little search will probably reveal the nest with six nearly fledged young ones, situated in a hole in a stump, or, if it be near a house, in a box set up for the purpose. The nest itself is large for the size of the bird, and is composed of a groundwork of sticks, on which is placed a layer of bark strips, the whole being warmly lined with feathers and snake skins; in this are laid five or six eggs, the ground color of which is entirely obscured by small spots of a deep pinkish buff. Another of the same family is the Winter Wren (*Troglodytes hyemalis*), but not breeding with us, and being of a very retiring nature, it is very little known. It comes to us in the fall, and frequents brush heaps and such places. When driven from one cover it will fly to another, always keeping close to the ground, and on alighting will hop along quite a way, so that another search will be necessary to discover it again. In color, it closely resembles the English "Jenny Wren," which, doubtless, many of our readers have seen, our common Wren, however, being considerably lighter.

Still another species of wren is the Long-billed Marsh Wren (*Cistothorus palustris*), which inhabits solely bulrush marshes. Here it may be found in great abundance, and in the month of June its funny little song may be heard on all sides, and in five minutes walk one will find several nests, most of them probably unoccupied, as this species has a habit of building many more nests than it needs. These are supported about three feet above the surface of the water by the bulrushes woven into their fabric, and are large, round affairs, with a hole in one side near the top just large enough to admit the passage of the bird in and out, although there is room enough for half a dozen birds inside. The eggs are colored on the same principle as those of the House Wren, only with dark brown instead of buff, and in both species a confluent ring of spots is visible around the large end.

The Chickadee (*Parus atricapillus*), which has been very silent since April, now begins to make itself noticed, the young being fully fledged and travelling in small troops of eight to ten with the parents. This bird seems to be an exception among birds; for, whereas most species sing best during the breeding season, this is nearly silent, its true song being scarcely ever heard except in early spring. During incubation it would be hard to find a more retiring bird, unless the nest be intruded upon, when it at once is as pugnacious as in the early spring. But no sooner have the young birds left the nest and become fully able to take care of themselves, than they are as noisy as ever, and continue so till the next breeding season.

The Cherry Bird (*Ampelis cedrorum*) is just now attracting considerable attention from the farmers, on account of its initial ravages among strawberries and early cherries. Its nesting duties are just beginning when those of most others are just completed. About this time (June 27) their nests may be found with three to five eggs, nearly as large as those of the Cowbird (*Molothrus ater*), and of a clay-blue color with a purplish tint, sparingly dotted with spots of black and partially concealed spots of brown. Notwithstanding that duty holds at least one of them to the nest, they manage to find time to visit the nearest orchard pretty frequently, in order to regale themselves on the rosy fruit, often provoking the well-merited wrath of the owner. We have seen trees of white cherries so totally devastated, that out of perhaps twenty or thirty quarts that should have been, there were not twenty or thirty cherries left. Under these circumstances, it becomes a matter for serious consideration whether these birds should not be exterminated; but, of course, this should not be determined until a thorough investigation shall have been made, and until then we presume every one has a right to do as he pleases, as the law now allows shooting for the protection of crops.

"What is the meaning of a back-biter?" asked a gentleman at a Sunday School examination. This was a puzzler. It went down the class until it came to a simple urchin, who said, "Perhaps it is a flea."

Minnie May's Department.

Answers to Correspondents.

A. B. asks for a receipt to make ice cream. A. The following gives excellent results: Scald a gallon of good sweet milk, and add to it with constant stirring eight eggs well beaten with one pound white sugar, and four spoonfuls of corn-starch, first mixed into a thick cream with cold milk. Cool; flavor to suit and freeze.

MARIA P.—You had better consult a doctor.

SED.—Apply lemon juice and glycerine to your face every night to remove freckles.

ROBT.—Are the initials of the Latin words *Requiescat in pace*, which means let him rest in peace.

M. S. R.—How long should a young man stay, when he calls on a lady in the evening, and if his company is not agreeable, how should she let him know? ANS.—Evening calls are made from eight to ten when a gentleman calls and is kindly asked to remain; but the length of a call must be always regulated by the habits of the family visited; if they are known to usually retire at nine it would be intruding to remain until ten; while in cities where later hours prevail eleven o'clock is not considered too late. However, a gentleman should never make an evening call unless he is certain that he will be welcome, and never remain to spend the evening unless properly invited. Young ladies of course feel delicate about giving invitations to remain, therefore their mothers or fathers should always be present to make welcome occasional visitors. A young man who is at all sensitive or well bred will soon discover that his company is not desired. Cool politeness will generally be a sufficient hint; if not, one might lower the temperature to the freezing point, but one must never let politeness get down to zero.

M. G. G.—Will you please inform me the exact length of time one should wear mourning? Can one go into society while wearing first mourning? Can one go into society while wearing second mourning? Do the same rules hold good here that govern such things abroad?—In England widows wear deep mourning for one year, then ordinary mourning as long as they may wish. One year is the time prescribed for a father or mother. In France etiquette limits the time of mourning for a husband to one year and six weeks—six months of deep mourning, six months of ordinary and six weeks of half mourning. For a wife, father or mother, six months—three deep and three half-mourning. In the United States there exist no fixed rules. Generally speaking, for one year no formal visiting is indulged in and no entertaining, except in exceptional cases. Mourning for a husband or wife is worn two years—one year deep and one year light, for parents from one to two years. While wearing deep mourning one does not go into society, neither are visits received.

To Preserve Flowers.

The following direction for preserving flowers in form and color we find in an English paper. The method is simple and is worth trying:—

There are many of our brilliant flowers—such as dahlias, pansies, pinks, geraniums, sweet williams, carnations, gladiolus—which may be preserved so as to retain their color for years. White flowers will never answer for this purpose, nor any succulent plant—as hyacinth or cactus.

Take deep dishes, sufficient to allow the flowers to be covered an inch deep in sand. Procure the common white sand, such as is used for scouring purposes; cover the bottom of the dish with a layer half an inch deep, and then lay in the flowers, with their stems downward, holding them firmly in place, while you sprinkle more sand over them, until all places between the petals are filled and the flowers buried out of sight. A broad dish will accommodate quite a number. Allow sufficient sand between.

Set the dish in a dry, warm place, where they will dry gradually; and at the end of a week pour off the sand and examine them. If there is any moisture in the sand, it must be dried out before using again, or fresh sand may be poured over them the same as before. Some flowers will require weeks to dry, while others will become sufficiently dry to put away in a week or ten days.

By this simple process, flowers, ferns, &c., are preserved in their proper shape, as well as in their proper color, which is far better than to press them in books. When arranged in groups or mounted on cards or in little straw brackets, they may be placed in frames under glass.

RECIPES.

R. A. P. asks for a certain and yet safe exterminator for roaches or croton bugs. Powdered borax does very well if properly used. Inject it, by means of a small bellows, into all the crevices and holes.

TO BAKE EGGS.

Butter a clear smooth saucepan, break as many eggs as will be needed into a saucer, one by one. If found good, slip into the dish. No broken yolk allowed, nor must they crowd so as to risk breaking the yolk after put in. Put a small piece of butter on each, and sprinkle with pepper and salt, set into a well-heated oven, and bake till the whites are set. If the oven is rightly heated it will take but a few minutes, and is far more delicate than fried eggs.

GREEN PEA SOUP.

Four pounds of beef, cut in small pieces, one half peck of green peas, one gallon of water. Boil the empty pods of the peas in the water one hour before putting in the beef. Strain them out, add

the beef and boil slowly an hour and a half longer. Half an hour before serving add the shelled peas, and twenty minutes later half a cup of rich flour, with salt and pepper. A little parsley is an improvement. After adding the rich flour stir frequently, to prevent scorching. Strain into a hot tureen.

HOME MADE OTTO OF ROSE.

Procure a quantity of the petals of any flower that has an agreeable flavor; card thin layers of cotton wool, which dip into the Florence oil; sprinkle a small quantity of fine salt on the flowers, and place layers of cotton and flowers alternately until an earthen or wide-mouthed glass vessel is quite full. Tie the top close with a bladder, and lay the vessel in a southern aspect, exposed to the heat of the sun, and in fifteen days, when opened, a fragrant oil may be squeezed away from the whole mass, little inferior (if roses are made use of) to the dear and highly-valued otto or odor of roses.

GINGER WINE, A PLEASANT SUMMER BEVERAGE.

To one gallon of hot water add three pounds No. 1 A coffee-sugar, one and a quarter ounces bruised ginger-root, two lemons, peel grated fine and juice squeezed in, and also two oranges in the same manner. Boil the liquor for half an hour, taking off the scum when it is well formed upon it. When nearly cool, add a tablespoonful of yeast spread upon a crust of bread, and turn the whole into a stone jar or crock and set by the stove. Let it work until well fermented, perhaps two or three days. Then bottle, and add a tablespoonful of whiskey or brandy to each pint bottle.

STRAWBERRY SHORT-CAKE.

Make a light rich short-cake of almost any kind. I prefer the soda-biscuit recipe, with a little more shortening added. Roll the dough rather thinner than for biscuits, and in shape to fit your baking-pans. Have ready a quantity of strawberries, the more the better; two quarts will make it very good, with the quantity of dough made from two quarts of flour. Mash the strawberries, make them quite sweet (of course with white sugar); add to this a pint of rich cream.

When the pans with short-cake are taken from the oven thoroughly done, split them open; butter each half liberally with good butter; lay one upon a large dish; spread the mashed strawberries thickly over it; lay the other half on the top of this, buttered sides up of both. Again spread thickly with the mashed fruit. You may, by having the baking pans of uniform size, make it with as many layers as you like. I prefer only two or three, as the pieces can thus be kept in better shape when

divided. A little pure cream added after dishing out is an improvement, but not at all necessary. Eat it while hot.—[Ceres.—American Farmer.

Rockeries or Ferneries.

These lovely additions to a country home should now be brightened up by putting into the crevices fresh rich soil, and planting into them Ivy Geraniums, striped and feathery grasses, Saxifrages, crimson Thrift, Columbines, *Festuca glauca*, *Campanula Garganica* and *rotundifolia*, *Phlox subulata*, and any kinds of ferns and vines which the woods and meadows offer to the flower lover.

There is a lovely climber called "Ground-Nut Vine," which fills the air with exquisite perfume in August, and is to be found in almost every State, turning its gracefully out leaves and hanging its beautifully fragrant racemes of chocolate and cream colored flowers from many a hedgerow. Its roots are tuberous and when our great-grandparents settled among the wilds of New England they roasted the roots as a substitute for potatoes. Plant

"Whate'er her complexion, I vow I don't care;
If brown, it is lasting—more pleasing if fair;
And tho' in her face I no dimple should see,
Let her smile—and each dell is a dimple to me.

"Let her looks be the reddest that ever were seen,
And her eyes may be e'en any color but green,
For in eyes, though so various the lustre and hue,
I swear I've no choice—only let her have two,

"Tis true I'd dispense with a throne on her back,
And white teeth I own are genteler than black;
A little round chin, too's a beauty I've heard,
But I only desire she may'n't have a beard!"

Preserving Flowers and Fruit.

Fruits and flowers may be preserved from decay and fading by immersing in a solution of gum arabic and water two or three times, waiting a sufficient time between each immersion to allow the gum to dry. This process covers the surface of the fruit with a thin coating of gum, which is entirely impervious to the air, and thus prevents the decay of

the fruit or the withering of the flower. Roses thus preserved have all the beauty of freshly plucked ones, though they have been separated from the parent stem for many months. To insure success in experiments of this kind, it should be borne in mind that the whole surface must be completely covered; for if the air only gets entrance at a pin-hole, the labor will all be lost. In preserving specimens of fruit particular care should be taken to cover the stem, end, and all, with gum. A good way is to wind a thread of silk about the stem, and then sink it into the solution, which should not be so strong as to leave a particle of the gum undissolved. The gum is so perfectly transparent that you can with difficulty detect its presence, except by the touch. Here we have another simple method of fixing the fleeting beauty of nature.

The Value of Vaccination.

An illustration of the value of revaccination is afforded by a report just furnished by the medical officer of the General Post Office in England. This report relates to an average number of 10,504 persons employed in the postal service in London, all of whom have been required to undergo revaccination on admission to the service, unless that operation has been performed

within 7 years previously. Among these persons, during the ten years 1870-1879, there has not been a single fatal case of small-pox, and in only ten instances have there been non-fatal attacks, all of which were of a very slight character. In the Telegraph Department, where the enforcement of revaccination has not been carried out with quite the same completeness, 12 cases have occurred in the same period among a staff averaging 1,458 in number. Eight of these attacks were of persons who had not been revaccinated, and one proved fatal. The remaining four were of revaccinated persons who all perfectly recovered without pitting. This experience, like that of the nurses at the small-pox hospitals seems to show that revaccinated persons enjoy absolute immunity from severe attacks of small-pox, and that their risk of catching that disease at all, even in its most modified form, is infinitesimal.—[New York Sun,

FEMALE EDUCATION.—Brilliant talents, graces of persons, and a confirmed intrepidity, and a continual habit of displaying these advantages, is all that is aimed at in the education of girls; the virtues that make domestic life happy, the sober and useful qualities that make a moderate fortune and a retired situation comfortable, are never inculcated.



THE OLD CHEESE-PRESS.

Lever Power, or the Foundation of Patent Rights.

the root on top of a rockery and let its slender vines fall all over the Ferns, and its delicate traceries will beautify even their exquisite beauty. Seeds of *Gypsophila elegans* and *muralis* scattered among the Ferns will also prove an addition.

It has been said that no good flower can be of an ugly color, and the same may be said of the hair. If it be well kept and well arranged, and set off with judicious ornaments or trimmings, no matter what the color, it is sure to look well, and may justly be called "woman's crowning glory." Did the poet intend his expression to veil a pun? A modern writer speaks of the hair as the "loveliest frame that could be devised for the human face;" but this opinion, although at first sight containing a pretty and happy symbol, needs qualification in its application to the fair sex. Unless the hair be all round the face the frame would be a one-sided affair; and we rather sympathize with Sheridan's preference for the absence of a beard in women! The verses to which I refer are from "The Duenna," and are too good to be abbreviated:

"Give Isaac the nymph who no beauty can boast,
But health and good humor to make her his toast;
If straight, I don't mind whether slender or fat,
And six feet or four—we'll ne'er quarrel for that.

Nucle Tom's Department.

MY DEAR NEPHEWS AND NIECES,—

Vacation is begun! The good times are here, times to let little heads rest from books and to give little hearts a freer chance to grow sweet and loving. There's no time for long introductory remarks in July, my dears, and the reason why is all out of doors, on "hill and field and vale and river," as somebody says. Well, my advice to you is, keep there as much as ever you can (out of doors I mean) and drink in the sweet air and bright sunshine to your heart's content.

UNCLE TOM.

DEAR UNCLE TOM,—

I am a little boy ten years old; we live about twelve miles from Lake Ontario, and go there to picnics and sail on the lake. I have a scroll saw and I earned the money to buy it with. I am earning money to buy a velocipede; I take care of the fowls. I have a penny for every dozen hen's eggs I gather and 3 cents for every dozen turkey's eggs. Then I pull mustard and other weeds off the growing grain. Last fall I had a penny for every bushel of apples I pared.

WILLIE SIMS.

DEAR UNCLE TOM,—

I live in the country. My home is a large white house which faces the east and has a verandah in the front of it covered with ivy. One day I thought I would have a concert with some of my playmates, and we built a stage in the yard under a pear tree, then we invited some friends and had a piano to accompany our songs. We had recitations and tableaux and earned a good deal of money; afterwards we had a picnic with the money we had earned. Children who live in the city don't know how nice it is to have little chickens; when they come out of the shell they are little downy balls. Once I set 15 eggs, fully expecting 15 chickens, but after three weeks two weak little chickens followed the sorrowful old hen. I named them Punch and Judy, because they had such comical whiskers. I must tell you their sad ends. Judy was stepped on by a horse and Punch came to an unhappy death in the frying pan.

Your niece,
EMILY ARMSTRONG.

Answers to June Puzzles.

124—Miserable.
125—Hidden Fish. 1. Salmon, 2. Perch, 3. Sole, 4. Cod, 5. Mackerel, 6. Eel, 7. Turbot, 8. Herring, 9. Smelt.
126—Puzzle—an egg.
127—Governors, rulers and statesmen should possess courage, honor, wisdom and integrity.
128—A plate.

Names of those who sent correct Answers to June Puzzles.

S Mann, Barbara Capron, John Clark, E A Boyd, P M K, Minnie G Gibson, Wm Howell, Charles M French, Robert Wilson, Tom Ellis, Mary Gardner, R H Poole, Ettie Robinson, Ralph Green, Geo Walker, J H Thompson, F N Gordon, T R LeVesconte, Alice Worthington, Edith Cassells, Ida Towles, Andrew Morris, T G Hillier, F N English, Oliver Jackson, Chas M Clarke, K E Pope, W S Anderson, Carrie Williams, Jennie Jones, Willie Mulloy, Maggie Ponsoby, Ida Triller, Harriet Brethour.

PUZZLES.

129—PICTORIAL REBUS.

BOD

130—ENIGMA.

I am composed of seven letters.
My first is in little but not in big,
My second is in hog but not in pig,
My third is in run but not in walk,
My fourth is in tongue but not in talk,
My fifth is in once but not in twice,
My sixth is in cats but not in mice,
My seventh is in poem but not in ditty,
My whole is a pretty Canadian city.

131—DECAPITATION.

Behad me and there is a bit left,
Behad me again and there is still a bit left;
Again behad me and still it is left,
My whole is desirable to cultivate.

ADDIE R.

132—CHARADE.

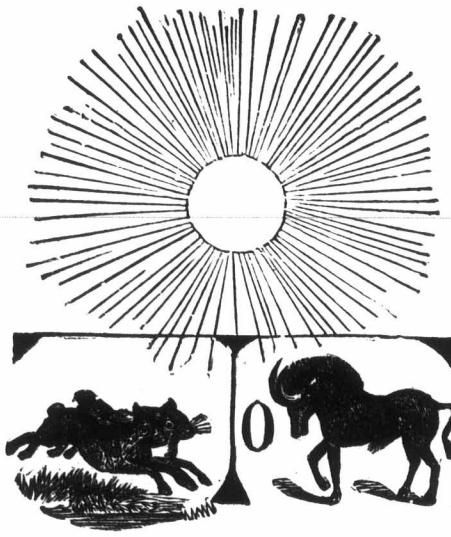
My first most commonly is blue,
Tho' often of a darker hue,
What is my next? a guileless thing,
That wends its way on airy wing
Towards the first, and as it soars
The music of its soul it pours
Fourth in one everlasting strain
Of melody—a sweet refrain,
The like of which is seldom heard,
My total, reader, makes a bird.

H. H. B.

133—CRYPTOGRAPH.

Joff ob mgi em ogigmuf mionbgd
Fcu b od nij em botjz kgbeo
Wgg jlb dgif od klek jlej dfionbgd
Emk jlcmod eqb mgj alej jlbz dbbo.

134.—ILLUSTRATED REBUS.



Humorous.

THE WRONG ANTIDOTE.—A clergyman on his way home from a camp meeting told some incidents of camp life. Among others was one of an old couple who had supplied themselves with a bottle of pennyroyal oil with which to keep off the mosquitoes. They extinguished their light and retired, forgetting the antidote. The mosquitoes were very bad, and, after standing it as long as they could, the old lady got up and got a well-filled ink-bottle instead of the oil and gave the old gentleman a thorough lubricating with the liquid—face, hands and feet; she then anointed herself in like manner. They again essayed to court the drowsy god, but could only get an occasional nap. Finally the old lady got up and struck a light. Giving a glance at the bed she had just left, she beheld to her horror a colored "pusson," as she supposed, stretched in the place of her spouse. She quietly got the poker and nearly beat the old fellow's brains but before discovering her mistake. Later on in the night we discovered the old couple to be on the boat with us, he with his head as big as a bale of hay and she caring for him with the greatest solicitude.—[Forest and Stream.

There is no exercise for a dyspeptic like that of trying to catch a pig in a ten-acre lot. You sail in vigorously, at first. Both of you enjoy it. The extra motion sets your blood going at a lively rate. The pores of your liver open. A bright color usurps the sallow places in your countenance. A new life seems throbbing in your veins. It is rare sport while it lasts. Meanwhile the pig doesn't get tired, but canters around gaily as if it knew it were saving a doctor's bill. Finally your mind becomes a little feeble; you feel as if you'd had enough, and you say to yourself, "I'll catch the pig now." You corner it at last. It stands facing you with its back to the fence. You're sure you've got it. You make a lunge. So does the pig. There is a collision. Your heels turn up towards the sky, your chin just gages the pig's back; there is a moment of complete darkness. When you get up and have cleaned the mud out of your nose, mouth and eyes, you may not feel like a victor in the fight. But it's no matter. The pig does.

Joaquin Miller: "How would a lecture by me, on Mount Shasta, suit the citizens of Boston?"
"Very well, sir, exceedingly well! They would be much better satisfied to have you lecture on Mount Shasta than in Boston."—[Boston Post.

London Bridge.

Proud and lowly, beggar and lord,
Over the bridge they go;
Rags and velvet, fetter and sword,
Poverty, pomp, and woe.
Laughing, weeping, hurrying ever,
Hour by hour they crowd along,
While, below, the mighty river
Sings them all a mocking song,
Hurry along, sorrow and song,
All is vanity 'neath the sun;
Velvet and rags, so the world wags,
Until the river no more shall run.

Dainty, painted, powder'd and gay,
Rolleth my lady by;
Rags-and-tatters, over the way,
Carries a heart as high.
Flow'rs and dreams from country meadows,
Dust and din thro' city skies,
Old men creeping with their shadows,
Children with their sunny eyes,—
Hurry along, sorrow and song,
All is vanity 'neath the sun;
Velvet and rags, so the world wags,
Until the river no more shall run.

Storm and sunshine, peace and strife,
Over the bridge they go;
Floating on in the tide of life,
Whither no man shall know.
Who will miss them there to-morrow,
Waits that drift to the shade or sun?
Gone away with their songs and sorrow:
Only the river still flows on.
Hurry along, sorrow and song,
All is vanity 'neath the sun;
Velvet and rags, so the world wags,
Until the river no more shall run.

F. E. WEATHERLY.

A boy after a week's absence in the country wrote to his mother: "I got here all right, and I forgot to write before; it is a very nice place to have fun. A feller and I went out in a boat and the boat tipped over and a man got me out, and I was so full of water I didn't know nothin' for a good long while. The other boy has got to be buried after they find him. His mother came from Chelsea and she cries all the time. A horse kicked me over and I have got to have some money to pay a doctor for fixing my head. We are going to set an old barn on fire to-night and I should smile if we don't have bully fun. I lost my watch and I am very sorry. I shall bring home some mud turkles, and I shall bring home a tame wood chuck if I can get em in my trunk."

"I am convinced that the world is daily growing better," remarked a reverend gentleman to a brother clergyman. "My congregation is constantly increasing." "Yes," interrupted the brother, who happened to be a penitentiary chaplain, "and so is mine." And there the discussion on the arrival of the millennium dropped.

A FAMINE INDEED.—An incident which has occurred in the experience of a preceptor will doubtless recur repeatedly in that of other teachers. According to a book, "In the year 1847-48 potatoes formed the sole food of the Irish peasantry." A schoolboy read this passage as follows: "In the year 1847, 48 potatoes formed the sole food of the Irish peasantry."

A three-year-old discovered the neighbor's hens in her yard scratching. In a most indignant tone she reported to her mother that Mr. Smith's chickens were "wiping their feet on our grass."

Bridget (who has discovered the carpet-sweeper) — "Luk at the music-box, now, wid the long handle! I wonder how they plays on the instrument?"

Strawberries come in so fast now that dealers have no time to put the small ones at the bottom of the box. —[New Orleans Picayune.

A reporter touchingly alludes to a man who was "killed and otherwise injured."

How to make money go as far as possible—give it to the foreign missions.

A bald headed man is always refined, and he can always show his skull-sure.

A pair of stockings—Gould and Vanderbilt.—[Wall Street Gazette.

Shelling Peas.

Pink-sunbonnet hanging down
O'er a fair face half a frown;
Basket tipped upon her knees—
Maiden busy shelling peas.
Looking o'er the garden wall;
Youthful figure straight and tall,
Lounges with a careless grace,
Straw hat pushed off sunny face—
And a pair of lazy eyes
Look with cool and calm surprise
On the fingers plump and white—
Shelling peas with all their might.
"Such a busy little bee
Puts to shame poor thriftless me!"
And a yawn, half made, half real,
To these words gives sign and seal!

Pink-sunbonnet nods assent,
Fingers gives the pods a rent,
As though saying, "Were these *you*,
I'd soon show you what I'd do!"

"So you think I *ought* to be
Quite ashamed of this 'poor me,'
Who bewails his lazy lot
And to better it tries not?"

Pink-sunbonnet gives a nod,
Cracks a fresh new glistening pod,
Which exploding seems to say,
Answering for her, boldly, "yea."

Lazy-eyes dart a quick look,
Naught but *silence* will they brook;
Bending closer they peer down
'Neath the bonnet's clumsy crown.

"I would toil and strive each hour,
Working with a will and power,
Had I aught to *work hard for*—
Some sweet bright reward in store."

Pink-sunbonnet laughs out now,
And the face is all aglow,
As she answers, pointing down
To her basket with a frown—

"Lots of shell and little peas;
Words are well and *sometimes* please;
But words are *shell*—its *fruit* we need:
Talk is easy—prove by deed!"

Quick the lazy eyes flash fire,
And the owner bends down nigher,
Till the color in his cheeks
Fades and flickers as he speaks—

"Ay, but 'tis *within* the shells
That the perfect fruit first dwells:
All my words I'll prove quite true.
If my *reward* may be you!"

Pink-sunbonnet's still and dumb;
Busy fingers quite o'ercome,
Drop the basket off the knees,
And down roll the half-shelled peas.

"See, you work in vain alone—
Without *help* naught can be done;
May I then through our lives be
Her mate to you loyally?"

Two brown hands clasp fingers white;
Lazy-eyes grow clear and bright;
Pink-sunbonnet 'gainst her will,
Looks up with cheeks pinker still,

And again it gives a nod—
Then a noise! Was it a pod?
Something sounded. As you please,
It all happened—shelling peas!

The exigencies of trade appear to be in continual conspiracy against the health of the human family. Some sharp man once found out that it was economical in the manufacture of tin-plate to introduce into it a small quantity of lead, and now the cheaper grades of tin are all adulterated in this way. This discovery is fraught with mischief, for when acid fruits come in contact with this mixture of tin and lead, they are liable to become contaminated and produce lead poisoning in those who eat them. The canning of fruits in this country is now carried on to a much greater extent than ever, and cases are frequently brought before the public in the newspapers, of injury done to families or individuals by eating fruit which has been thus preserved. For those who preserve their own fruit or vegetables, glass or earthenware vessels are absolutely safe, and much to be preferred to those made of metal.—[Rural Home.

Ants.

Sir John Lubbock in the *Journal of the Linnean Society* gives the following interesting observations on ants. Many experiments are recorded which had for their object the throwing of some light on the power of communication possessed by ants. It is unquestionable that if an ant discovers a store of food her comrades soon flock to the treasure, although this is not invariably the case. It has been urged that this fact taken alone does not prove any power of communication. An ant observing a friend bringing home food might infer, without being told, that by accompanying the friend on the return journey, she might also participate in the good things. This argument has been met by Sir J. Lubbock's compelling the ant who found the treasure to return empty-handed. If she took nothing home and yet others returned with her, he argues, there must have been some communication between them. As the result of these carefully conducted and striking experiments, he concludes that ants are in possession of something approaching to a language—that they are able to ask their friends when occasion requires to come and lend them a helping hand. His observations on their recognition of relations are very surprising. Young ants reared from eggs taken from a nest were, when they reached maturity, introduced to the maternal abode, and although the old ants could never have seen them until that moment, yet in all the cases (ten) they were undoubtedly recognized as belonging to the community; a stranger ant is invariably at once attacked and killed. It would seem that the recognition is not personal and individual, and the fact that they recognize their young born in their own nest even when these have been brought out of the chrysalis by strangers, seems to indicate that the recognition is not effected by any sign or password. The very important physiological fact seems proved by some of those observations that "when worker ants lay eggs these always produce males." As to the longevity of ants, some of Sir John Lubbock's ants have attained the considerable age of at least six years. When a queen was introduced into a queenless nest, she was at once attacked and destroyed; it would seem as if ants which had been long living in a republic could not be induced to accept of a queen. Some peculiarly interesting observations are made as to their treatment of aphides. The aphid in this case observed was the one to be found on the daisy. Their eggs are laid early in October in the axils of the leaves of the plant. They are of no direct use to the ants, yet they are not left where they would be exposed to the severity of the weather and to innumerable dangers, but they are collected by the ants and brought into their nests. Here they are tended with the greatest of care through the long winter months until the following March, when the ants bring out the young aphides and place them to browse on the then young shoots of the daisy. This is certainly a most remarkable case of prudence and forethought. Though, apparently, the ants do not lay up food for the winter, they do yet more, for they keep during six months a store of eggs which will enable them to procure their food during the following summer. It will be remembered that European ants most generally live on food not easily kept fresh, such as insects. They have not learnt the art of building cells for honey, nor still less of storing this up in living honey-pots, as the honey ant of Mexico does. But withal, they have shown themselves in their habits very wise. It may not be without interest to the reader, possibly now residing in some country place where ants are sure to abound, to know that these observations, so full of novelty and interest, were chiefly carried out in the months of September and October.

MINHO PEASANT GIRLS, PORTUGAL.—Nowhere among the peasants of any nation that we have seen in person or in picture have we met more barbaric brilliancy of costume than at the meeting of Minho country girls in holiday attire. The flashing colors of the very full, many pleated stiff petticoats, the immaculate white sleeves and dark bodice, with its embroidered border, and gay kerchiefs over the dark locks and about the neck, and the profusion of filigree jewelry, a little gold being hammered out so as to go a great way and expanding itself into cobwebs of delicate tracery, waffle-iron ear-rings as large as the palm of a man's hand, and several pairs worn at once, the entire corsage covered with a cuirass of chains, hearts, crosses, and other ornaments, made up a *tout ensemble* which even Solomon in all his glory would have found it hard to rival.

Stock Notes.

Galloway Cattle.

During the past month we have had greater demands on us than ever before for information regarding the Galloway and Polled Angus cattle, not merely for information, but from gentlemen who have come to our office desiring to expend twenty thousand dollars in this class of stock if they could procure them; but the fact is we have not enough of this class of animals in Canada to fill the demand now made for them. A few were sent into Kansas and other Western States, and they have been found so hardy, to thrive so well, and make such good beef at early ages, that the demand for them for breeding stock is now far in excess of the supply.

The *London Daily Telegraph* has the following upon American horses:—

"It is not a little significant of the influence produced by the recent successful performances of trans-Atlantic horses in English races upon the value of thoroughbred stock in the United States that a yearling colt has just been knocked down in the State of Tennessee for 1,500 guineas, by far the largest price ever paid in America for a thoroughbred yearling. It is certain American colts will henceforth play a more noticeable part in the two great 3-year-old races in England and France. Already J. R. Keene has found reward for his spirited outlay, seeing that the Grand Prix de Paris was won by his fine colt Foxhall. Nor let it be supposed that love for thoroughbred horses is a taste but recently acquired by what Gladstone calls 'our kin beyond the sea.' For at least a century and three-quarters the finest thoroughbred blood of these islands has been transported westward across the Atlantic. Among the winners of the Derby Americans have taken from us Diomed and Saltrau, John Bull and Spread Eagle, Sif Harry and Arch Duke, Lapdog, Priam and St. Giles. The list of the other famous stallions or Belgravian mothers, which have also gone west, is as long as the Homeric catalogue of ships assembled before Troy. In a word, the United States have spent enormous sums in buying the best equine stock of these islands, and when, as will sooner or later inevitably be the case, they meet with European reward, let no grudging jealousies be interposed to mar England's gracious and cordial reception of well merited victory."

A meeting of the American Hereford Breeders was held at the "Grand Pacific Hotel," Chicago, June 23rd, for the purpose of forming an association. The attendance was large and all present manifested a lively interest in the plans for effecting an organization. Several of the States and some of the Territories were represented. It was resolved by those present that the society shall be known as the "American Hereford Breeder's Association," and that the officers shall consist of a President and twelve vice-Presidents, a Secretary, Treasurer and auditing committee of three. C. M. Cuthbertson, of Chicago, was elected President, L. S. Miller, Beecher, Ills., Secretary, Adam Carl, Lafayette, Ind., Treasurer. A full board of vice-Presidents and auditors were chosen. The object of the association is to promote and foster the Hereford interests in America.

At the sale of Thoroughbreds held in New York U. S., June 2nd., P. Dawes, Esq., Maplewood Stock Farm, near Lachine, Que., purchased the following fashionably bred fillies, viz: Chesnut filly foaled 1879, bred by Hon. August Belmont, Nursery, L. I., U. S., also two bay fillies, foaled 1879, bred by P. Torill, at Raucoocas stud, N. J. An eminent American authority speaking of Mr. Dawes' purchase, says, "All three of these fillies are richly bred, and will certainly prove a great acquisition to the stock interests of Canada. They are a longway the finest bred animals of their kind ever imported into Canada."

The Guelph Agricultural College recently sold 16 fat cattle at 7½ cents per pound. The entire lot were shipped to the English market. The sheep recently imported from England by the College have arrived safely at the College farm. The cattle are yet in quarantine. Among the sheep are some fine specimens, but there are also some that are very inferior.

A few days ago we had the pleasure of calling on John Snell's Sons, Edmonton, Ont., Among their pure bred Cotswolds and Berkshires we saw many fine animals. Among the lambs of 1881, and the yearling ewes were a large number of good specimens. They also showed us some very fine young pigs.

Mr. A. A. McArthur, of Balmoral Farm, Lobo, Ont., called at our office the 28th of June. He reports his stock all doing well, and that a very strong demand for Berkshires continues. He had that morning shipped eight to various parts of Canada and the U. S.

A joint stock company, with \$500,000 capital is being organized in Montreal for establishing a stock farm in the Northwest. Andrew Allan, Frank Stephen and Thomas D. Millburn are the Provisional directors.

Several gentlemen in Ottawa are forming a company for the purpose of stock raising in the Northwest. They have secured 100,000 acres of land in the Bow River district.

To the Directors of our Dominion and Provincial Exhibitions:

There is a just complaint coming from exhibitors of butter, namely, that the butter is never kept in a proper temperature when at the exhibitions. We shall be pleased to hear a report from the directors of the exhibition that takes the first and best steps to improve on the present plan. Ice is cheap and plentiful this year. Messrs. Withrow and Hillock, of Toronto, might give valuable suggestions, as they thoroughly understand the construction of ice houses and refrigerators, and no doubt could suggest what would answer the purpose at the exhibitions.

Agricultural Exhibitions of 1881.

Quebec Provincial Exhibition to be held in Montreal, Que., September 14th to 23rd.

Ontario Provincial Exhibition to be held in London, Ont., September 21st to 30th.

Dominion Exhibition to be held in Halifax, N. S., September 21st to 30th.

Great Central Fair, to be held in Hamilton, Ont., October 4th to 7th.

ADDITIONAL CORRESPONDENCE.

ORCHARD GRASS.

SIR,—I like the ADVOCATE much better now than when I first commenced taking it in 1874.

Some time ago you recommended growing Orchard Grass as early feed for the cattle. I sowed about an acre of my orchard last year on the 15th of May; some of it was 19 inches long, and on the 26th of May, some measured three feet. I commenced feeding it to the cows and horses on the 24th. I should like to know if it would do to keep some of the first crop for seed, or what time it should be cut in order to save it the same as hay. I sowed some peas and oats thinking it would come in for early feed before the Orchard Grass; but it will not be ready to cut until July.

A. S., Tara P. O.

[Allowing the grass in the orchard to mature and ripen its seed would be a means of exhausting the fertility of the soil, and consequently would diminish its fruit-bearing capabilities, as grain crops impoverish the land on which they are grown. This is the only objection to your saving seed from your Orchard Grass; you might however set apart a plot of that now growing for that purpose, and afterward by manuring it restore what it had been deprived of. That portion you wish to cure for hay cut before the seed is formed.

Locusts are appearing throughout large portion of the west and south, in accordance with the prediction of the United States entomological commission six months ago.

Commercial.

FARMER'S ADVOCATE OFFICE,
London, June 28, 1881.

The month now closing has been one of unusual coldness for the time of year. Frosts in many sections have been frequent, but still we think the damage done will not be serious.

WHEAT.

The prospect for this, the farmers' great staple, is not so promising as it was this time last year. Reports from various parts of the province vary a good deal. Winter killing is reported from Bruce, Grey, North Simcoe and Brant, and low lying lands in other sections.

Upon the whole the crop of fall wheat in Ontario is likely to prove a light one; still the average is large, and should the weather prove favorable that the heads may fill well we may expect for more than an average crop. The Department of Agriculture at Washington estimates the wheat crop of the United States for 1881 at 80 per cent. of an average crop. Michigan, Ohio and Iowa will in all probability not yield that much. The chinch bug is said to be troubling the barley and spring wheat in some sections of several States.

It is worthy of notice that our present prices of wheat are relatively much higher than those of Great Britain, and in many instances have been so for months. The cause of this has been the large milling demand and the duty on American wheat, which compels our Canadian millers to buy at home instead of taking advantage of the cheapest market. The milling and flour trade assuming very important proportions, and is becoming a very large factor in the export trade of Canada and the States. Another monster mill is to be built at Minneapolis, which will turn out five barrels of flour per minute, or about 8,000 barrels per day. It will take 10,000,000 bushels per year to supply this mill, and the value of its annual product will be about \$14,000,000.

WOOL.

Business in this article has been very active, and prices have moved up very considerably. The woolen trade is evidently on a much more satisfactory basis, and dealers and manufacturers seem to have more confidence in the future. There is, however, a limit to prices, which growers will do well not to forget. There is every prospect of a healthy and prosperous trade if prices are kept within reasonable limits; but any speculative excitement in the country has no foundation to rest upon.

CHEESE.

The late upward tendency of the cheese market the past ten days has been checked, and we may look for a quiet, if not a dull time for a few weeks. The fact is, in our opinion, the market has been forced too high, when we remember the very heavy make there is now going on under the most favourable circumstances. To this we may add the very heavy shipments that have gone forward the past two weeks from New York and Montreal. These two weeks' shipments amount to some 300,000 boxes, which are now afloat, and will be landed within the next ten days. The make of June cheese is very fine, but should we get any excessive heat, much of it will go off in flavor, as cheese made in extreme cool weather will not stand excessive heat. Factory men will therefore do well to move their goods when fit to ship, even if they have to accept what they may think a low price.

BUTTER.

The make of butter is either much smaller than usual, or the farmers and dealers are not selling freely. If the latter, we think they are making a grave mistake. The day has gone by when the

trade or consumers will take old butter and pay the same price that fresh is commanding. It is reported that the quantity of butter stored away in cold storage in the United States this season exceeds anything before heard of. If such is the case we should feel like selling our butter and storing the money in some bank for safe keeping.

London Markets.

GRAIN	
Per 100 lbs	Per 100 lbs
Deihl Wheat... \$1 90 to 2 00	Rye..... 80 to 80
Treadwell..... 1 90 to 2 00	Corn..... 95 to 1 00
Clawson..... 1 90 to 2 00	Peas..... 1 10 to 1 25
Red..... 1 95 to 2 05	Oats..... 1 00 to 1 05
Spring..... 1 80 to 1 80	Barley..... 1 30 to 1 50

FLOUR AND MEAL.

Flour, fall wht. 3 25 to 3 50	Oatmeal fine..... 2 75 to 3 00
" mixed... 3 25 to 3 50	" coarse... 3 00 to 3 50
" 3 00 to 3 25	Cornmeal..... 2 00 to
" 2 75 to 3 00	Shorts..... 18 00 to

PRODUCE.

Apples p bush. 30 to 80	Potatoes, old bag 75 to 90
Butter, roll... 13 to 19	do new peck 60 to 80
do fresh... 13 to 16	Turnips, p bag 30 to 50
do in basket 00 to 00	Beef, per cwt 5 00 to 7 00
do store packd 00 to 00	Mutton, lb... 7 to 8
Eggs..... 10 to 14	Lamb..... 9 to 9
Carrots, p bu 15 to 25	Veal..... 3 to 7
Onions, bag.. 75 to 1 00	Dressed hogs, per 100 lbs. 7 00 to 7 25
Ducks..... 60 to 60	Geese, each 40 to 45
Chickens, pr 25 to 30	Turkey " 75 to 1 25
Cheese, per lb 11 to 12	Wools..... 25 to 25

English Markets.

London, June 28th.
Beerbohm's Telegraph, London.—Floating cargoes of wheat quiet but steady; corn do. Cargoes on passage and for shipment. Wheat not much demand; corn do. Liverpool, spot wheat firm, corn unaltered.

Liverpool, June 28.
Flour 9s 6d to 11s 6d; wheat spring 9s 3d to 9s 5d; red winter 9s 6d to 9s 10d; white 9s 4d to 9s 9d; club 9s 9d to 9s 11d; corn 5s 2d; barley 5s 3d; peas 6s 7d; pork 74s; lard 5s; bacon 43c to 44c; tallow 35s to 35s; beef 92c; cheese 51c.

Chicago Market.

Chicago, June 28th.
Flour dull and weaker. No 2 spring \$1 10½ to \$1 11 1-2; corn weak and lower 44 1-4 to 44 1-2; oats 38 1-2; rye steady, condition unchanged. Barley strong and higher, \$1 1-2; pork \$16 30 to \$16 33.

Boston Markets.

Boston, June 28th.
Corn yellow 61c to 62c, ungraded 52c to 61c; oats 43c to 61c; wheat \$1 10 to \$1 13; rye \$1 15 to \$1 20; barley 90c to \$1 12; shorts per ton \$15 to \$16; middling \$18 to \$20; cotton seed meal per ton \$28; hay per 20 0 lbs \$22 to \$23; straw 100 lbs \$1 75; apples per bu \$2 50 to \$2 75; butter, creameries, 22c to 24c; beans; or bush \$2 25 to \$2 75; cheese 6c to 9c; eggs per doz. 17c; potatoes per bush, rose, 9 c to \$1 10, prolific 5 c to 8c, new per bush \$2 50 to \$3 50; poultry per lb 15c to 23c; hams 11c to 13c, bacon 10c to 12c; beef per lb 6c to 25c; mutton 11c to 20c; pork 12c, veal 15c to 20c.

Montreal Market.

Montreal, June 30th.
Market quiet and prices unchanged. Flour superior \$5 95 to \$6, extra \$5 85 to \$5 90, fancy \$5 65 to \$5 70, spring extra \$5 65 to \$5 70; superfine \$5 60 to \$5 20, strong bakers \$5 75 to \$6 50, middlings \$4 20 to \$4 30, polands \$3 90 to \$4 00, Ontario bags \$2 70 to \$2 80, city bags \$3 20 to \$3 25. Grain, wheat winter \$1 23 to \$1 31, upper Canada spring \$1 27 to \$1 31, white and Milwaukee spring \$1 24 to \$1 25; corn 56 1-2c; peas 90 1-2c; oats 41c; barley 70c to 75c; rye \$1 05 to \$1 07; oatmeal \$4 60 to \$4 70; cornmeal \$3 to \$3 05; butter western 14c, B. M. & E. townships 15c to 19c, creamery 20c to 21c; cheese 9c to 9 1-2c; pork \$20, ham 11c to 12c; bacon 11c to 12c.

Toronto Market.

Toronto, June 30th.
Fall wheat \$1 20 to \$1 25, spring \$1 20; barley No. 1 75c, No. 2 65c to 70, No. 3 50c to 60c; oats 37c to 38c; peas 75 to 76; corn 60c; flour superior \$5 70, extra \$5 55, fancy \$5 40, strong bakers \$5 50, spring extra \$5 25; oatmeal \$4 30 to \$4 54; cornmeal \$3; pork \$20.

New York Markets.

New York, June 29th.
Flour less active, low grades 5 to 10c lower, others unchanged, closing heavy, rye flour dull and unchanged; cornmeal steady and unchanged. Wheat No. 2 spring \$1 24, No. 2 red \$1 27 1-2 to \$1 29 1-4; rye \$1 04 1-4; barley and malt dull and nominal, corn lower and market weak. No. 2 56 1-2c to 56 3-4; oats market firmer, 49 to 47c; hay dull 50c to 55c; potatoes dull and unsettled, \$1 25 to \$1 50; butter firm 12c to 23c; cheese 7c to 10 1-2c.

Chicago Live Stock.

Chicago, June 28th.
Hogs, estimated 20,005 head, official yesterday 20,563 head. Light grades \$5 75 to \$6 10; mixed packing \$5 60 to \$5 95 heavy shipping \$6 to \$6 25. Cattle 400 head. Maine cattle. New milch cows and springers. The call is moderate, 5 new milch cows were sold for \$200, three two year o.d heifers for \$75, 1 Jersey Springer for \$50, two cows and calves, very fine milkers, for \$138.

NEW ADVERTISEMENTS.

BUTTER COLOR. Every Farmer's Wife SHOULD HAVE Hansen's Butter Color, The best in the market. Sample bottle 25 cents. Put up in 25c, 50c, and \$1 bottles. JOHN S. PEARCE & CO., 187-c LONDON, ONT.

DOMINION EXHIBITION of 1881 WILL be held at the CITY of HALIFAX, Nova Scotia, in the ROYAL EXHIBITION BUILDING and GROUNDS, from 21st to 30th SEPTEMBER. When Cash Prizes to the amount of \$15,000.00 will be awarded for Horses, Cattle and other Live Stock, Machinery of all kinds, General Manufactures, Mining, Agricultural, Forest, Fishery and Dairy Products, Fruits, Plants and Flowers.

GRAND Provincial Exhibition To be held on the Exhibition Grounds, Mount Royal Avenue, Montreal. Arranged in three departments, AGRICULTURAL, HORTICULTURAL AND INDUSTRIAL. OPENS WEDNESDAY SEPT. 14. Exceptional Horses, Cattle, Sheep and Swine, which arrive two days later, viz., FRIDAY, SEPT. 16th. Closes Friday, September 23rd. \$25,000 Offered in Premiums.

Grimsby Basket Factory. JOHN CROSS & SON, MANUFACTURERS OF Peach, Strawberry, Grape, and Market Baskets. BUTTER DISHES, ETC. FULL STOCK ALWAYS ON HAND.

R. A. BROWN Cherry Grove, Ont. Has 20 varieties of Land and Water Fowls. Young stock for sale now. Get your chicks early and secure the best. Send for circular.

The People have proclaimed THE CLYDESDALE THE KING OF DRAFT HORSES.

One importation for 1881 already received, another on the way, and another ready to leave Scotland, and still others to follow from time to time. The largest and finest collection ever seen on the American Continent, of the best and most popular strains, including the get and progeny of the greatest prize-winners of Scotland, and among them the only horse that ever crossed the Atlantic that ever won and held the Great Challenge Cup.

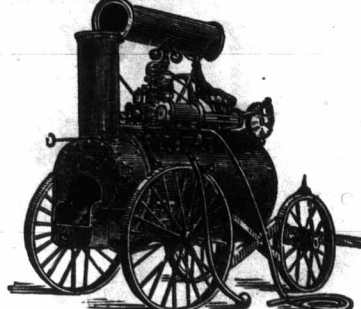
POWELL BROS. Springboro, Crawford Co., Pa. Importers of Clydesdales.

Also extensive breeders of Hambletonians and other desirable strains of trotting stock, and importers and breeders of Holstein and Devon Cattle. They feel fully justified in saying that their experience, their facilities, and the extent of their business, enable them to offer inducements to any wishing to purchase EITHER CLASS of stock, NOT SURPASSED BY ANY FIRM IN THE COUNTRY. Prices low. Terms easy.

BERRY BASKETS & CRATES, Peach, Plum, Cherry and Grape Baskets. Bushel and Market Baskets, Clothes Baskets, &c., &c. W. B. CHISHOLM, Oakville Basket Factory.

\$66 a week in your own town. Terms and \$5 outfit free. Address H. HALLETT & Co., Portland, Maine.

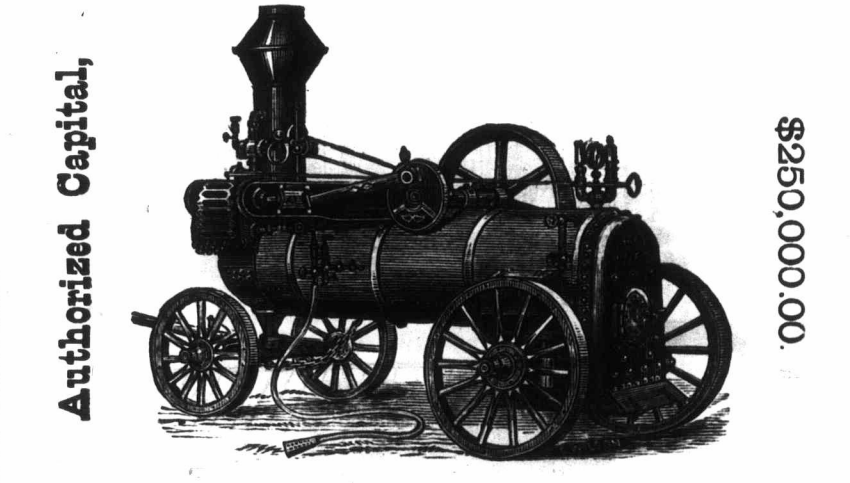
\$5 to \$20 per day at home. Samples worth \$5 free. Address STYRON & Co., Portland, Maine.



NOTICE TO THRESHERS. WE would advise farmers and others not to purchase until they have seen White's Improved Portable Farm Engine, made at the Forest City Machine Works, London, Ont. These engines are licensed by all the leading Insurance Companies. Will burn long wood, are the most powerful, and are handled with the least trouble. My engine is giving the best of satisfaction everywhere. The farmers say it is lighter, stronger, and does more work with less fuel than any engine in the Townships where it is used.

H. L. Church's HAY ELEVATOR And Carrier. THE BEST IN USE. WORTMAN & MOHRW Manufacturers, LONDON, ONTARIO. Send for descriptive Circular and Price List. Responsible Agents Wanted.

THE HAGGERT BROS. Manufacturing Company, BRAMPTON.



Authorized Capital, \$250,000.00. MANUFACTURERS OF THE Cornell Portable Fire-Proof Engine, The only Engine in Canada having an entire Steel Boiler. Constructed upon purely scientific principles. The only Traction Engine that propels and guides itself on the road without the aid of horses, and that goes either forward or backwards.

The Dustless Grain-Saving Separator, Pronounced by all practical threshers to be the best thresher ever offered. For fast threshing, threshing without waste, little dust, and great durability it has no equal. No green stacks are found, and hens die of starvation after the DUSTLESS GRAIN SAVER threshes. Don't be imposed upon by interested and unscrupulous agents or principals into buying any of the old style of heavy, cumbersome engines that will only prove a source of annoyance and expense, and keep a span of horses, wood and water; but send for illustrated circulars with testimonials from purchasers, that our Cornell Engine and Dustless Grain-Saving Separator are away ahead of all others, to— HAGGERT BROS. Mfg. Co., BRAMPTON, ONT., or HAGGERT & COCHRANE 81, THOMAS, ONT.

GOOD BOOKS FOR THE Farm, Garden & Household

- Allen's (R. L. & L. F.) New American Farm Book... \$2 50
American Dairying, by Arnold... 1 50
American Bird Fancier... 50
Allen's (L. F.) American Cattle... 2 50
Barnard's Simple Flower Garden... 35
Strawberry Garden... 35
Barry's Fruit Garden... 2 10
Buist's Family Kitchen Gardener... 1 00
Book of Household Poets, paper... 50
Bommer's Method of Making Manures... 25
Brill's Farm Gardening and Seed Growing... 1 00
Culver's Fruit Preservers' Manual... 25
Clock's Diseases of Sheep... 1 25
Cooked and Cooking Food for Domestic Animals... 50
Dadd's American Cattle Doctor, 12 mo... 1 50
Every House Owner's Cyclopaedia... 3 75
Ellice's Lawns and Shade Trees... 1 00
Farming for Boys... 1 00
Flint on Grasses... 2 50
Fuller's Forest Tree Culturist... 1 00
Flax Culture. (Seven Prize Essays by Practical Growers)... 30
Fuller's Grape Culturist... 1 50
Fuller's Small Fruit Culturist... 1 50
Fulton's Peach Culture... 1 50
Gardening for Pleasure... 1 50
Gregory on Squashes (paper)... 50
Grant's Best Book Sugar... 1 25
Gregory on Cabbages... 30
Carrots, Mangolds, &c... 30
Onion Raising... 30
Guenon on Milch Cows... 75
Harian's Farming with Green Manures new Harris on the Pig... 1 50
Henderson's Gardening for Pleasure... 1 50
Henderson's Gardening for Profit... 1 50
Henderson's Practical Floriculture... 1 50
Hop Culture. By nine experienced cultivators... 80
Hunter and Trapper... 1 00
Johnson's How Crops Grow... 2 00
Johnson's How Crops Feed... 3 00
Johnson's Winter Greenhouses at Home... 1 00
Klippart's Wheat Plant... 1 75
Law's Farmers' Veterinary Adviser, author's ed... 3 00
Law's Farmers' Vet'y Adviser, Can. ed... 3 00
Our Farm of Four Acres. Paper, 50c; Cloth, 60c; extra cloth... 1 00
Potato Culture—(Prize essay)... 25
Pockald's Our Common Insects... 1 50
Quincy's Mysteries of Bee-keeping... 1 50
Quincy (Hon. Josiah) on Soiling Cattle... 1 25
Quinn's Pear Culture for Profit... 1 00
Roe's Manual on the Culture of Small Fruits... 50
Rarey and Knowlson's Complete Horse Tamer... 50
Roe's Play and Profit in my Garden... 1 50
Any of the above useful books will be mailed post-paid, from THE FARMER'S ADVOCATE Office on receipt of price named.

AMERICAN DAIRYING: MANUAL for BUTTER & CHEESE-MAKERS; BY L. E. ANOLD, A. M., Secretary of the American Dairymen's Association and Contributor to the FARMER'S ADVOCATE.

PARTIAL LIST OF CONTENTS: American Dairy System, Associated Dairying, Dairy Production, Dairy Farming, Dairy Stock, Ayrshires, Dutch or Holstein, Short-horns, Grades of Milking Breeds, Dairy Cattle, Food for Dairy Stock, The Dairy Barn, Rearing Calves, Milk, Butter Making, Butter Factories, Creameries, Cheese Factories, &c., Preparing Coloring for Cheese and Butter, To Prepare Basket Annatto, Complete Outfit for a Cheese Factory of 400 Cows, Analysis of Cheese, &c., &c. Price, \$1.50, handsomely bound in cloth.

The Farmers' Veterinary Adviser. By PROF. LAW, Cornell University, Ithaca, N. Y. Contributor to the FARMER'S ADVOCATE. Will direct the common farmer how to relieve the distressed animals whenever relief is practicable. Price, \$3. Recently Published. New Revised, and Enlarged Edition.

Drainage for Profit and Drainage for Health. By George E. Waring, Jr., Engineer of the Drainage of Central Park, New York, with nearly fifty illustrations. CONTENTS: LAND TO BE DRAINED; HOW DRAINS ACT; HOW TO MAKE DRAINS; HOW TO TAKE CARE OF DRAINS; WHAT DRAINING COSTS; WILL IT PAY? HOW TO MAKE TILES; RECLAIMING SALT MARSHES; HOUSE AND TOWN DRAINAGE. Price, postpaid, \$1.50. The above will be mailed from the office of this paper, postpaid, on receipt of price.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with SEEL and TEE Complete, in 20 minutes. It will also knit a great variety of fancy work, for which there is always a ready market. Send for circular and terms to the FRENCH KNITTING Machine Co., 409 Washington Street, Boston, Mass. 184-h

SATISFY YOURSELF BY ENQUIRING OF ANY OF THE 463 PURCHASERS

—OF THE—

Fire-Proof Champion Farm Engine

463

CHAMPIONS SOLD IN

4 SEASONS

Sensible, practical farmers and threshers will consider the magnitude of these sales and readily draw the correct inference—most favorable to the Champion—that such testimony of excellence and special adaptability to their wants, is **INFINITELY** greater than the hollow, windy puffs of prizes and medals awarded at Public Exhibitions and so-called tests, where wire-pulling and intrigue are the order of the day—and where the judges, even if capable, have no such opportunity of deciding the adaptability of each Engine to the wants of the farmer and thresher, as the practical men who use them.

Not one Engine has been returned nor has a single accident happened where a Champion has been at work.

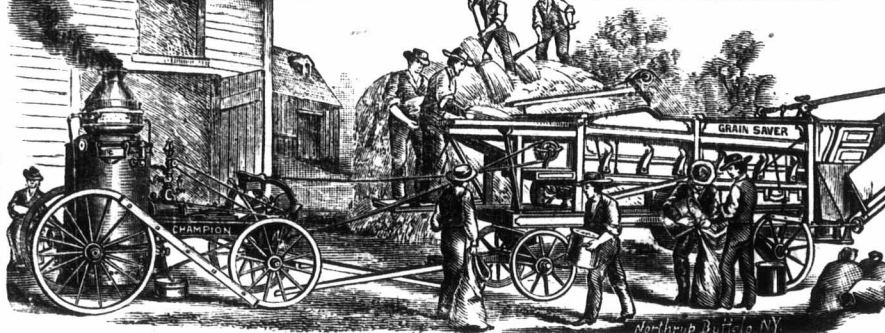
Capacity of Works per week: 1 Portable Saw Mill, 1 Portable Grist Mill, 3 Standard Chopping Mills, 6 Champion Farm Engines.



Send for Price List and Circulars.

**PORTABLE
SAW MILLS,
CRIST MILLS,
CORN MEAL & BUCK-
WHEAT MILLS,
SHINGLE MILLS,
OUR SPECIALTIES.**

THE FIRE-PROOF CHAMPION IN THE BARNYARD



ADDRESS WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA.

We Give them All. None Reserved. We Court Enquiry.



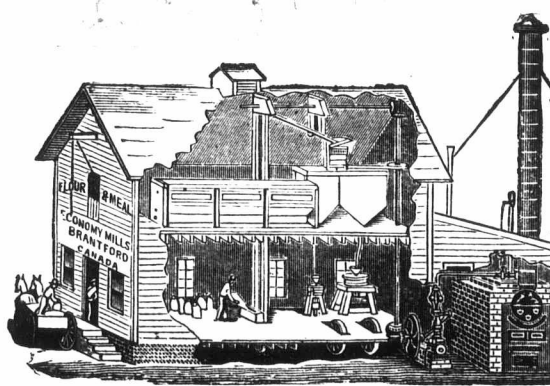
WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA.

Portable Saw Mills our Specialty for Over Thirty Years.

Engine No. ONE.
Houghton Centre, Nov. 17, 1880.
Waterous Engine Works Co., Brantford, Ont.
Gentlemen,—We have the first Champion Engine ever built by you, purchased first by James Ray, of Courtland, and then purchased by us. As far as we can see or know the Engine and Boiler, it is as good to-day as ever. We have threshed about 79 days this year, and did not have to stop a moment during that time on account of the Engine, and the only expense was 10c. for a small set screw in governor. This Engine has had 4 seasons' run and was not well taken care of by Ray, either. I am well satisfied with my Engine in every respect, but wish I had a Traction attachment. The boiler is perfectly tight and has never had a tool on it since it left the shop, that I know of. I have a number of Horizontal Engines and Boilers threshing around us, but none of them can do the work we can, either as cheaply on wood and water or as quickly. Why! we can do from 30 to 50 minutes threshing before the other Engines can get steam up. While threshing near the lake this summer, with the wind fair of the lake, blowing smoke right through the barn, a Horizontal Engine () was sitting further up the lake in exactly the same position, with the wind in the same quarter, this Engine set the barn on fire and burned barn, separator, grain and everything. A farmer by the name of Israel Mariott was carrying the grain away, and before he could get out got his whiskers burned off. We threshed afterwards for Mr. Mariott, which shows that our Engine has the confidence of the people as regards fire. We know it is perfectly safe when water is kept in the reservoir and there is no excuse why it should not be kept full, as it only requires the turning of a tap to do it. We are thoroughly and perfectly satisfied with our Engine.

Yours truly,
ROBERT L. ANGER.
T. ANGER.

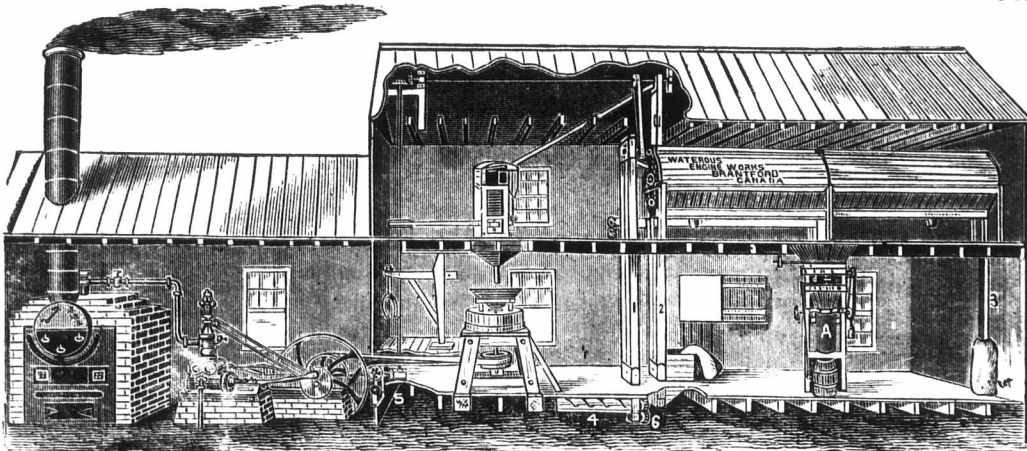
These facts prove conclusively that the assertions of interested parties, "that the Champion Engine is short-lived and soon plays out," are pure fabrications on their part, and miserable falsehoods.



TWO-RUN MILL.



CHAMPION AS A TRACTION ENGINE.



One-Run Two-Story Portable Mill.

The Most Popular Engine in Canada. The Only Engine Safe from Fire and Explosion. 13 Insurance Companies License the Fire-Proof Champion. Call and See The Champion Tested—We Test One Every Day. Send for New Circular.

Waterous Engine Works Co.,

Brantford, Canada.

SPECIAL NOTICE BOILERS FOR 1881.

To further improve our Champion Engine we have this year purchased iron for our boilers from the celebrated Krupp Iron Works of Essen, Rheinisch Prussia, where some 12,000 men are employed. Mr. Fred. Krupp writes as follows:

"Referring to the 200 fire-box plates and 400 circular plates sent to Brantford, I have to inform you that the following tests have been made here with a number of said plates:— Send for circular giving account of tests of plate.