

1883
(LIMITED)

FARMER'S ADVOCATE

AND HOME MAGAZINE

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THE FARMER'S ADVOCATE AND HOME MAGAZINE.

WILLIAM WELD, Editor and Proprietor.

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

Impartial and independent of all cliques or parties, the FARMER'S ADVOCATE aims to present to the farmers of Canada with an unbiased judgment the agricultural news of the day.

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

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3. Remittances at the risk of the subscriber unless made by registered letter or money order.
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We point with some little degree of pride to the continued generous patronage accorded our advertising pages by leading manufacturers and enterprising breeders, indicating how valuable THE FARMER'S ADVOCATE has become as an advertising medium.

SIR,—Mr. Wm. Shier recommended your paper so highly to me that I now send you \$1.00 for it.
S. D., Kirkton, Ont.

[This is the way our circulation increases; over 3,000 new subscribers have been added the past year in this way, and they who once take it appreciate it, and renew their subscriptions promptly year after year.]

Our Monthly Prize Essay.

Our prize of \$5.00 given for the best essay on the comparative advantages and profits of *Summer and Winter Dairying*, has been won by J. B. Bessey, of Georgetown, Ont., and will be published in our next issue.

A prize of \$5.00 will be given for the best essay upon *The Advantages of Maintaining Township Exhibitions*. [On account of the many exhibitions the time for receiving this essay has been extended to the 15th November.]

Our Exhibition Issue for 1883.

All subscribers who are desirous of having a copy of our special mail issue for any friend or friends are requested to forward such names with P. O. address at once. Our Exhibition Issue is free on application to our subscribers being included in their annual subscription, and will be very interesting to them as well as to their friends. Send names at once. As this issue is issued mainly to procure our usual large addition of new names at this time, our friends will kindly use the copies received to the best advantage.

THE FARMER'S ADVOCATE was started as a four-page sheet in 1866, at 50c. per annum. Its circulation was less than 500 copies, and not over 5,000 copies for the year. In 1868 the paper was increased to 16 small pages, and the price became \$1.00 per annum, whilst the circulation was about 3,000 per month, or 40,000 in the year. During the past year, by the press of reading matter and advertising patronage, we have been compelled to increase our size to thirty-six pages, without any increase in subscription of \$1.00 per annum, whilst the circulation has not been less than 16,000 copies in any month, and the total circulation has exceeded 225,000 copies. For this month, Oct., 1883, we will issue over 20,000 copies independent of our mammoth Exhibition Issue, to be mailed on the 15th inst. Next year we hope still further to increase the value of your paper, without any additional expense to its patrons, and confidently ask each subscriber to send in at least one new name for 1884.

How to Get Subscribers and Win Premiums.

Select your premiums. Make out a list of neighbors or farmers in your vicinity, who, if they do not take the paper already, should become subscribers. Call upon them systematically for a few evenings, and you will be surprised to find how soon you have collected sufficient subscriptions to entitle you to almost any article you desire in our list. Have a small blank book or memorandum that will contain the name of each subscriber as fast as you secure them, and you will discover that the influence of numbers will aid you materially. When B sees that A has subscribed, he will be influenced to do likewise, especially after you have shown him one of the issues of the paper. When you send the names to us, we will forward the Premiums to your address. Our subscription list is to-day larger than ever. We ask the co-operation of our subscribers and friends in placing the FARMER'S ADVOCATE AND HOME MAGAZINE in every farmer's home.

The FARMER'S ADVOCATE, while essentially a farmer's paper, is much more besides. Among its varied contents are well-written editorials and numerous extracts and compilations on subjects of interest to the intelligent reader of every class. There is fun and amusement for the home and instruction for the field, garden and live stock departments, which cannot be surpassed in any other publication we know of. It is a matter of congratulation, too, that this publication, though issued in London, has enjoyed a commercial success far beyond that achieved by any other similar journal in Canada. The reason is that it is edited and directed by men of practical experience as well as book knowledge of the matters upon which they have to treat.—[Free Press, London, Ont.]

By the Way.

Some fine fairs yet.
Better plow a little deeper this fall.
Use the roller on the winter wheat.
Do not be sparing of the whitewash.
Come, boys, now "go for" the coons.
Are you ready for Jack Frost's visits.
The best manure is the foot of the owner.
To prevent cold fingers dig potatoes early.
Always separate sick animals from the others.
For long evenings—good agricultural papers and books.

Tobacco water or carbolic soap suds will destroy the plant lice.
A little linseed meal mixed with the feed is good for scours in sheep.

Plough for next year's oat crop early, so that the rain and warm weather will rot the sod.

Manure pear trees in the fall. Fresh manure applied in the spring is liable to produce blight.

Sow orchard grass early or wait until spring. It must get a good stand or it will be uprooted by the frost.

For black knot on plum trees, cut away and burn the diseased parts. If you neglect this you will surely lose the tree.

Teach the cows to come to the bars night and morning by simply baiting them with a handful of meal slightly seasoned with salt.

Sow spinach every two or three weeks until cold weather for a succession of plants in the spring. Protect through the winter with leaves or straw.

Mr. James Beal attributes his agricultural success to the habit of guarding against little leaks. For one thing, his stock consume or make into manure all his stalks and straw.

A correspondent of the Germantown Telegraph says his hickory timber which proved most durable was cut in autumn—"after all the leaves had fallen and the sap had disappeared."

In one Kansas county in "early amber" sorghum cane there is a yield of 150 gallons an acre at forty cents a gallon. The seed is worth fifty cents a bushel for stock feed at twenty bushels to the acre.

DO YOUR WORK THOROUGHLY.—This is especially necessary in farm work. Half-way work is little better than no work. When you undertake to exterminate thistles or daisies or quack grass, do it. Don't rest satisfied with trying and with partial success. Plough them under and keep them there by repeated ploughings. When you hoe a crop do it in such a manner that there will be no living weeds left behind your hoe. Good work is the cheapest.

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Editorial.

Roads.

There is a great need in this country of not only having good roads, but also those that are tastefully laid out and planted with various kinds of shade trees. What, it might be asked, adds more to the appearance of a country, not only to the appearance, but to the value of the land, than good roads and tidy farms with well laid-out fronts? Wherever you see farms on a good road planted with trees and showing taste, even if the land is inferior, you will find it rising in value over superior soil differently situated. The outlay of a few dollars in beautifying roads in the front of farms will add hundreds to their value. With the abundance of all kinds of valuable trees which are at the farmers' hands, they can be put down for a mere nothing, both with regard to cost and labor. The beautifying of roads is not only for individual benefit, but it is *pro bono publico*—for the public benefit as well,—and the Government has recognized this by allowing so much per tree to each individual that plants trees on the highways. It is well known that Ontario is fast becoming depleted of its timber, and especially those varieties most fitted for shade trees. Take the maple, for instance, and what with its superiority as fire wood and its extensive use in manufactures, it is fast disappearing, and young maple trees sell every spring at a high price. But whilst beautifying our roads a profitable investment can be made, especially for future generations, by planting nut-bearing varieties of trees, which answer at the same time as shade—for instance, sweet hickory, walnut and chestnut. These trees are hardy, of medium growth, and not only bring forth an abundance of valuable fruit, but also the wood is valuable in manufacturing. By beautifying roads it would first add to the appearance of the country at large; it would enhance the individual property, and lastly, by planting nut-bearing trees there would be an annual profit from the sale of this fruit to the farmer. We know of no more enchanting scene than to take a drive at this time of the year along some of our roads and see the over-hanging walnut laden with its huge stone-like fruit, and the opening shells of the sweet hickory, and the clustering burrs of the chestnut. Farmers, beautify your roads and homes by planting trees!

Buying Cattle to Feed.

The question is frequently asked if buying cattle to feed pays, or whether the greater profit does not arise from a farmer breeding and feeding his own stock, or otherwise combining the two. Certainly if a farmer in this country, who follows a mixed husbandry, can always raise enough stock for his own feeding, with such a one the best results will be from feeding his own stock; for he who sells stock to feed must have a profit, or stock raising would cease. So the man who raises his own stock just gains this profit. However, as some farms and some farmers are so situated that stock raising is not convenient, they have to depend upon buying their animals to fatten; and not only this, but also the feed upon which they are fed—the owner merely supplying the capital, stable room and hired help. The actual advantage from this class of feeding, according to the evidence of prominent stock feeders, was the profit on the manure. In the words of one of the gentlemen largely engaged in buying and feeding cattle, who gave evidence: "I feed principally for the manure, and if I make the value of the manure as a profit, after paying labor and expenses, I am perfectly satisfied. I am feeding stock as much to improve

my farm as for any profit I make out of steers." This would be thought insignificant to the ordinary farmer, as this manure question is never taken into account by them. But then there are more profits than the dung to most farmers, for there are the profits derived from his own and his family labor, besides manufacturing often otherwise unsaleable feed into beef. A farmer having a large quantity of feed, and deficient in stock, is necessitated in buying if he intends to keep up the fertility of his soil, whether his feeding operations pay more than the dung or not. No doubt that owing to the high price of store steers last fall, caused by there not being sufficient stock raised in the country for feeding purposes, the feeding operations of a number of farmers were not a financial success; but this is an exceptional case. Another thing, there were a great many poor steers, and a number who were not judges, because they covered so many years, thought they must be worth so much, whilst there are plenty of well bred two-year-olds as large as scrub breds are at four. It does not pay to feed a scrub; you are only throwing away your feed and labor. And here is where the majority lose by buying and fattening poor stock. If a thorough-bred or a grade can be made at two and three years of age to weigh as much—and they can—as a scrub at four, here we have one and two years' feeding lost—and certainly this does not pay. But the buying and feeding of well bred stock will pay where the feed is raised on the place, and especially if the labor is performed by the ordinary hand, which would be required anyway. Buying stock to feed will pay, if only for the manure.

Windmills and Water Rams.

There is scarcely a season in this country, if we except spring, that there is not more or less drought, and a scarcity of water. It is very often the case, even in mid-winter, when the previous fall has been dry, that farmers have to drive their stock a long distance through drifted roads to some stream. Indeed, if ten farmers were taken, not two of these have a convenient natural water supply for their stock, summer and winter, and through all seasons. A farm may have a plentiful supply of water in part of it, and none in another; and hence about 8 farms in 10 have to depend upon wells to supply their stock with water a greater portion of the year. Driving stock to water a long distance, either in summer or winter, has an injurious effect upon stock. If you, say, drive a herd of cattle a mile on a hot day to a stream, by the time you get them back again through the dust and heat and consequent fatigue, they are just as thirsty as when they started out. In winter, again, on a cold day, stock are allowed to go a long distance to the back part of a lot to drink; by the time all of them get through, if there is a large herd, they get chilled through, and stock watered this way cannot thrive. A sure and convenient water supply is a great desideratum, and is most essential to the success of every stock raiser, and to have this about eight farms out of ten will have to depend upon artificial means, or through wells or reservoirs, and as stock cannot very conveniently drink out of a well or a cistern, the water must be raised to the surface by pumps. The raising of this requires power from some source, and we are sorry to say that the majority of our farmers think the old hand pump is all that is required. A farmer now-a-days would hardly like to go back to the days of the old reaping hook to cut his grain; yet pumping water by hand for his stock is on a par with this. A wind-mill now can be had so cheap for pumping purposes, that it is a wonder a farmer would spend his time pumping by hand. On Sunday or week day, whether

the men are at home or not, the cattle are watered without any manual labor. It is strange that well-to-do and advanced farmers in other respects do not perceive the enormous advantages which would accrue to their water supply from a properly constructed wind mill. In the Western States they are a common thing on nearly every farm. These farmers find it does not pay to pump water by hand any more than to cut grain with a sickle, and the same applies to this country. If a farmer here has much stock, it will take some part of the farm labor a considerable time to attend to the watering, and at the present price of labor it won't pay to pump by hand.

Again, on streams cheap rams could be constructed so as to pump the water a convenient distance to the buildings, and spare all this driving the cattle down to the creek. It is not only water that is required on a farm, but it wants to be convenient and so that it will be of easy access at any time to the stock. We are satisfied that if our farmers would try the wind-mill and ram system they would be satisfied with the results.

On the Wing.

On the 19th of Sept. we left London. The corn, beans and vines had all been destroyed by the un-usual early frost we had about ten days previous. We noted that all the corn was injured until we descended to the low land below the mountain, between Niagara and Hamilton. There the corn and vines were yet green, and the peaches looked very tempting as we passed the numerous peach orchards to be seen in this vicinity, such as can now where be found in any other part of this Dominion. The nearest approach to it is in the county of Essex. It is a great advantage to have land where the temperature is moderated, as it is on the southern banks of Lake Ontario, in the vicinity of Niagara.

We walked over the nurseries of Stone & Wellington, near Fonthill, Ont.; here the frost has not done as much harm as on other lands of the same altitude. These nurseries are on light, rolling land. The stock of trees and shrubs were looking remarkably healthy, and considerable fruit is raised in the nurseries. It gave us a better opportunity of witnessing the ripening of different varieties of grapes than we have previously had.

At Niagara Falls, formerly called Clifton, we met Mr. William Armstrong. He had some of the finest peaches we have seen this year. His fruit farm is situated near Queenston, Ont., about six miles from the Suspension Bridge. He has 30 acres, nearly all of which is in fruit, 10 acres being in peaches. He is striving to supply the early and late peaches, although he raises large quantities of the Crawfords. He informs us that he believes he has discovered the cause of the Yellows in the peach. He has for some time watched a small bug that punctures the new wood of the peach, which in after years develops into the Yellows which is so destructive to the trees. He is paying great attention to it, and in time, if any remedy can be found, we shall be pleased to herald it to you.

From here we proceeded to the place for which we had started, namely, Batavia, in New York State, where a County Fair was being held, at which a trial of implements was to take place. Although only a County Fair, there was opposition in the county, and even in Batavia, for a new company had actually got up another exhibition with better buildings and nearer the town, and had held it a few days previous; but we understand that the new company had relied strongly on horse racing and other attractions to draw the people. One of the papers stated that one of the greatest attractions on the principal day was a baby show; but despite

these allurements, the old Batavia Agricultural Exhibition far excelled it in utility, in the exhibit of all kinds of agricultural productions and machinery. But to compromise matters, the Directors had granted the horsemen some privileges which tended to interfere with the trial of implements; for instance, they caused the trial of implements to cease at 2 o'clock on Friday to allow the horse class to draw more attention, and they certainly succeeded, for at one part of the programme a mule race was announced. The mules started off pretty fairly, but mules are different to horses; too much whipping will cause them to bolt, stop or turn. But they certainly caused the greatest amount of amusement that we ever saw at any race, for they would go just as they pleased and when they pleased, and in two instances the mules went right through the crowd, and the third mule took a notion to make a short cut, and was seen wending his way among the implements despite the exertions of the driver. You may be assured there was some loud laughing at this race. The "Mule Race" novelty is recommended to our Sporting Fair Directors.

Our attention was more devoted to the stock, products and implements. There was a fair show of stock in general; in the exhibit of Merino sheep they excel. They had a good exhibit of Holstein, Jersey and Devon cattle, and also a few Brittany cattle. This class we have not yet seen at our exhibitions. But in our opinion the crowning point of this Exhibition was the trial of agricultural implements. There were four different patterns of sulky gang plows on the ground, but only three exhibited their working capacities. Only two common plows operated. After the plowing was finished the rollers were tested, then the harrows, cultivators, scufflers, seed drills, &c. We cannot particularize about each, but in regard to new implements, Mr. Henry Ives has constructed a complete set of cultivating tools, to be attached to one frame, by which he believes that much better work can be done than is now being done by our present cultivating implements. He can keep the land entirely free from weeds, and loosen the ground; also cultivates deep or merely cuts the thistles and weeds, or extracts the roots of the couch grass. He harvests the beans in the simplest manner we have yet seen. He also attaches a potato digger, and all the implements appear to do very excellent work when properly used. They are growing in favor where known and used. None of these implements as yet are being made in Canada, but should be introduced and tested at once. Batavia is situated in an excellent agricultural district, the Genesee Valley, the Garden of the United States, which has long had a high reputation; but the frost has injured the bean and corn crop very much this season, and they depend on beans much more than we in Canada do for a main crop. The celebrated Wiard plows are manufactured here, and the new works of the Johnston Harvester Co. are now erected; the latter company employ from 700 to 1,000 hands when in full blast. But what astonished us most was, that our informant said that the majority of the machines turned out at this establishment were sent to Europe, and other foreign parts, even to New Zealand and Queensland. Well, perhaps some of our Canadian manufacturers may yet turn more of their attention to supplying our brethren in the antipodes, as the Waterous Engine Co. are doing with their milling machinery.

During the coming winter we hope that our readers may get up a good discussion in regard to the future management of our agricultural exhibitions. Amusements are right and proper, but it is a question to be answered whether at agricultural exhibi-

tions the main and controlling interest should be in the hands of the speculators or showmen, or in the hands of the practical farmer—or, in other words, where shall we draw the line? These trials of implements might with advantage be introduced into many of our exhibitions. A half acre of land is sufficient to put any quantity of implements to work at different times; we do not think much more than half an acre was used at the great trial at Batavia. We cannot say that we appreciate or favor fancy baby shows and similar exhibits at agricultural exhibitions. Still one American at Batavia said it needed something to stimulate the American ladies to exhibit children, because as they were progressing now, foreigners must inherit the property, as so few Americans leave descendants. We do not think our agricultural exhibitions should step so far out of their sphere; we must leave something for the moral teachers to do.

The Industrial Exhibition.

The first held was the Industrial Exhibition at Toronto. The railroads and steamboats gave unusual accommodation to visitors this year. The grounds and buildings were in excellent order, and the weather most favorable. Our coming King, Prince George, accompanied by the Princess Louise and the Marquis of Lorne, our present Governor-General, were the great magnets of the first week. They were all looking very well, but their visit happened to be when the weather was the least propitious, and the week before the stock and products of the farm, garden and orchard were on the grounds.

There was an excellent display of agricultural implements of high merit and finish. Similar implements have been exhibited at the principal exhibitions in years past, and will be seen at the leading exhibitions throughout the Dominion. This year some have slight alterations to make or talk about, but every alteration is not always an improvement. The greatest step in improvement has been made in the self-binding harvesters. There are now exhibited for the first time several binders that have decided improvements; some are entirely novel, or have so much novelty in their construction that they almost appear to be new machines. They are simplified, and many can be constructed at much less cost than the old binders.

Coming events cast their shadows before. The display of sulky plows this year exceeds anything ever before seen in Canada. This convinces us that our farmers are in future to be found riding and plowing, instead of walking all day. These sulky plows have been so much improved that in the field they are no longer an experiment, are efficient and give satisfaction. Thus many firms are about to enter into the manufacture of them for the coming year.

The Carter Ditcher has been remodeled and we think greatly improved. It appears like an efficient machine for many localities; it possibly and most probably is the best ditcher in the world, and may be of inestimable value for future generations. It is eighteen years since the inventor commenced the labor of inventing and perfecting it. He expended about \$20,000 of his own property on it; another person then sank nearly \$100,000 in it. Now he has a third person who has purchased a two-third interest in it. Such is quite often the lot of real enthusiastic inventors who bring out of their brains something that is of benefit to the world for future generations. These implements are now about to be manufactured on a larger pattern in England, and are also to be made in the United States. We say, well done, Carter! This Ditcher is entirely a Canadian invention.

Perhaps the greatest deficiency in the Exhibition was the display of potato planting and potato digging implements. There was one of the latter

implements exhibited, but its appearance was not such as to inspire confidence. We did not notice any hay tedder on exhibition. Often farmers have asked for them, but it appears no manufacturers deem them of sufficient importance to make them.

The main building contained a large display, principally from the Toronto stores, each line having something special to attract attention. The carriage building, stove buildings and machinery hall were all attractive, but exhibitors complain much about the length of time and expense of attending and exhibiting for two weeks, when all the business could as well be done in three or four days. The fruit, grain and stock were not on exhibition when we were there. We leave that for other assistants to attend to, as we are invited to attend other exhibitions, and cannot spare time for two visits.

Live Stock at the Industrial Exhibition

The display of live stock at the Toronto Fair of 1883 may fairly be said to have been an extraordinary one, both in regard to numbers and quality, nearly all the classes being well filled, and most of them with animals of high-class quality. A striking feature in many of the classes was the very large number of imported animals exhibited. This was particularly noticeable in the sheep classes, and led to the remark that it was more like an exhibition of English stock than of Canadian. Limited space precludes the possibility of giving a detailed account or criticism of the stock exhibited, and we confine our remarks to a general report.

HORSES

were largely represented in nearly all the classes, the heavy draughts taking the lead in numbers, and probably in the amount of interest excited, and these certainly made a grand show, something over seventy of the animals shown in this class being imported, while the class of Canadian-bred draughts showed very plainly the great value of the Clydesdales, especially for crossing with the common mares of the country to improve the character of the stock. There was also a very creditable display of Percherons, a class somewhat new in this country, but well worthy the attention of our farmers, their superior action and useful appearance indicating that in many respects they "fill the bill" for a farmer's every-day horse, and if they prove themselves as well adapted for crossing with other stock, they will soon be much sought after. The lighter classes were well represented, especially the roadster classes, but we noticed a lack of the lofty, large-sized carriage horse, and could not but think that something of the type of the "Cleveland Bay" is much needed to fill this want.

CATTLE

The rings in which the different breeds of cattle were exhibited in competition for the prizes, formed centres of attraction for the lovers of bovine excellence, and visitors showed, by their close attention to certain rings, just where their fancy or their interest was centered.

The Shorthorn class being most largely represented in the show, as it is in the country, was surrounded by a large number of the leading breeders of the Province, who sharply criticised the work of the judges, who, in this case, were certainly competent men, but who seemed too often to forget that their reputation was at stake, and that it was the animals they were called to pass judgment upon, and not the owners. We have seldom heard so many expressions of dissatisfaction with the awards, not only from exhibitors, but also from disinterested on-lookers. This remark applies especially to the class of yearling bulls and the herd prizes, and there were those among the spectators who did not hesitate to express the opinion that the first prize in the former ring was given more with a view to the position the animal might take in the herd ring, than on account of any individual merits of his own; and with regard to the decision in the competition for herds, the most charitable comment we have heard was the expressed hope that the committee acted conscientiously. In this connection it may not be out of place to remind those who are called to fill the important trust committed to judges that they have to run the gauntlet of an intelligent criticism on the part of their brother breeders, and that they cannot afford to disregard it, or to be indifferent

to it. From conversation with breeders and exhibitors, we are led to believe that the one-judge system, the appointment of a competent expert, is growing in favor, as by this system the responsibility is fixed, and cannot be shirked, as it often is when it is divided between three.

In the ring for sweepstakes for the best bull of any age, the competition lay practically between the two-year-old bulls, Prince James, owned by Mr. Fothergill, of Burlington, and The Earl of Mar, owned by Messrs. Green, of Oakville. Both were magnificent animals, though of widely different styles; the former being wonderfully furnished for his age, though he had the advantage of five months over the Earl, who has but recently come through quarantine, and had nothing like the amount of flesh that his rival had. It was a difficult question to decide, and we are not disposed to quarrel with the decision, which was in favor of Prince James, though we very much doubt whether any one of the committee would have chosen him as his own to have and to keep, if such choice had been offered them. The sweepstakes for the best female in the class was by common consent given to the three-year-old cow shown by Messrs. Snider, of German Mills, a perfect model of a living Shorthorn. The bull calf and heifer calf rings were a very attractive display, there being 21 in the former and 19 in the latter, every one a good one, and these called out the remark from an enthusiastic breeder, that with such a nursery the country was safe, no matter which party was in power.

THE JERSEYS.

A breed almost in direct contrast to the Short horns, being bred almost exclusively for their great butter-producing qualities, without regard to beef, were represented by the two well known herds of Mrs. Jones and Mr. Fuller, and a very attractive and interesting show they made, with their fine, deer-like appearance, and their capacious udders and rich yellow skins, indicating that in many cases their pedigrees were written in butter as well as on paper. In this class the management had decided to try the experiment of appointing only one judge, and accordingly invited the well known Jersey expert and exporter, T. S. Cooper, of Coopersburg, Pa., to judge the Jersey class. The way he went through his work was really refreshing, and in great contrast to the dilly-dallying and delay witnessed in some of the other rings, under the system of consultation and compromise. The practical eye of the expert very quickly selected the most meritorious animals, the work was quickly done, and we believe that, on the whole, the exhibitors were well satisfied, and believed that even-handed justice, without fear or favor, was dispensed.

HOLSTEINS

were represented, for the first time, by a herd of 19 imported animals, shown by Messrs. Lord, Cook & Son, of Aultsville, Ont. The animals had just passed through ninety days of quarantine, and were in thin condition, but showed large frames and large milking capacity, and though they did not meet our expectations as to appearance, we are willing to believe they will prove a very useful and valuable dairy herd, as they have in other countries.

POLLED ANGUS.

These beautiful cattle were out in small numbers, but of superb quality, and attracted much attention.

The Galloways, second cousins to the Angus, were all in the hands of one exhibitor, Mr. McCrae, who showed thirty-five head, a uniformly good lot, and in view of the active demand for these cattle for the western ranches, a very valuable lot.

HEREFORDS

made a very grand show, and well sustained their position as superior grazers and beef producers. They were in few hands though in goodly numbers.

THE GRADES AND FAT CATTLE

were a very grand lot—all Shorthorns and their grades, which shows that for feeding animals the Shorthorn bull has been more freely used than any other, and that the other beef-breeds have yet to make their mark in this line in this Province, which no doubt they would do favorably if they were more generally used.

THE GRAND SWEEPSTAKES

prize, styled the Elkington Shield, valued at \$250, for the best 20 head of thoroughbred cattle, called

out only three herds, representing three different breeds; the Shorthorn herd of Messrs. Watt, of Salem, the Galloway herd of Messrs. McCrae, of Guelph, and the Hereford herd of Mr. Stone, of Guelph. These made a very pretty as well as a very imposing show. The judges were to be "the judges of all the cattle classes combined," the vote to be by ballot, but when the time for competition arrived only six judges could be found, and as most of these were interested in Shorthorns, it was hardly expected that any other breed but Shorthorns would win, though it was but fair to say that apart from any prejudice of interest, it would have been up-hill work to get over the Shorthorn herd shown, and the award was a unanimous vote for the Shorthorns.

SHEEP.

The exhibit of sheep was a very large one, all the breeds being fairly well represented, the Downs largely predominating from the fact that several large importations, aggregating over three hundred head were brought in direct from quarantine, and most of them for sale. This fact had a tendency to create the impression that the country had gone into the breeding of Downs wholesale, but on closer examination it was found that there were very few sheep in the show in those classes that were bred in Canada, certainly not more than twenty per cent., and we believe less than that proportion.

This feature of the show is fast leading to the demand for separate classes and prizes for Canadian bred sheep, as our Canadian breeders find it almost impossible to compete with the prize animals from the Royal and other shows in England which are being imported from year to year, fed and fattened as only the English shepherd, who devotes all his time and skill to it, can do; and our exhibitors, so far as these classes are concerned, are not what they are intended and supposed to be, namely, an exposition of the products of this country, but that of a collection of English sheep, bred, fed and fitted on the other side of the sea. We would not for a moment discountenance or discourage the importers of fine stock, to whose enterprise the country is deeply indebted, and who have done incalculable service at great risk in improving the stock of this country, but would make distinct classes for imported and for home-bred sheep.

Cotswolds were out in small numbers, only three exhibitors competing, and two of these showing only half a dozen each; Mr. James Main taking the bulk of the prizes with his imported flock, which included several of the prize winners at the Royal show.

Leicesters and Lincolns were numerous, and more home-bred sheep were shown in these classes than in any others.

Southdowns made a rich and rare show, and we believe largely increased their list of friends.

Shropshires made the largest show in respect to numbers, and there were many very fine specimens, but these were imported.

Oxfords were not numerous, but of very good quality and in very high condition and finish; there were only two or three exhibits in this class, and the prizes were principally divided between the Messrs. Arkell, of Guelph and Teeswater.

Merinos were represented only by two or three exhibitors in small numbers, and of very moderate quality.

HOGS.

The show of hogs was not as large as usual at the Toronto fair. Exhibitors complain that the prizes offered are too low to encourage them to come out in force, the prizes being quite out of proportion to those offered for other classes of stock, when the cost of preparation and transportation is taken into account, from the fact that they have to be carted and hauled from place to place in carts or drags, for which exorbitant charges are often made the consequence is a great many empty pens and a moderate show, where the wise expenditure of a few hundred dollars would call out a large and interesting display.

The Berkshires were out in largest numbers and of excellent quality, the Messrs. Snell, of Edmon- ton, being the largest exhibitors, winning the herd prizes as usual; Messrs. Sorby & Hewer, of Guelph, being the next largest exhibitors, followed by Messrs. McNish, of Lyn, and Hogan, of King, and others.

In the class of Suffolks the old standard exhibitors, Main, of Milton, Featherstone, of Credit, and Franks, of Caledon, were on hand with strong exhibits, besides several new men with a few good

ones. Essex and Yorkshires were out in lesser numbers but of fair quality. A few good specimens of Poland Chinas were shown by Mr. Baldwin, of Essex, and Mr. Ware, of Hamilton.

The Provincial Exhibition.

Which has just been held in Guelph, has been a grand success as far as the exhibit of live stock could make it. Guelph being located in an excellent agricultural district, where roots are raised to a greater extent than in any other part of the Dominion, excellent herds of cattle and flocks of sheep are kept, and many breeders had driven a long distance on account of the honor that has been attached to winning a Provincial prize. The exhibit of stock has been pronounced by many to have been the best that has ever taken place in Canada, despite the fact that some of our very best herds have not been represented at any exhibition this year. The exhibit of agricultural implements was very good. A very excellent show of fruit was made, considering the season. The display of grain and roots was the worst we have seen for years. The show of grain was most meagre, and had it not been for a few good samples, it would have been simply disgraceful to a county exhibition—dirty bags tied up, dirty samples, and but very little of it. The greatest exhibit of wheat in the straw was made by the Model or Experimental Farm of Ontario, and a viler lot of rusted straw and shrunken heads was never before displayed at any exhibition. The results of common culture, moderate manuring and high manuring were shown, and, at a passing glance, one would be inclined, judging from the appearance of the straw, to consider that the greater the expense for manure the greater the amount of rust in the straw and the smaller the head. In a corner of another building, a long distance from the one in which this grain was shown, there was a really very fine exhibit of straw and grain, sent from Thunder Bay and Algoma. The straw and heads of grain really made a grand exhibit, although only a small quantity was sent when compared to the exhibit from the Model Farm. These two samples shown by Algoma and Ontario should be preserved by the friends of Algoma, for they carry off the palm with flying colors, notwithstanding the infinitesimal space occupied by Algoma in comparison to the enormous space allotted to our Government.

The arrangements for the reception of the stock were most incomplete. The men were shifted about, the classes were not properly arranged, sheep, hogs, and cattle were mixed together, and one would have to walk all over the ground before seeing all that were exhibited in any particular class; and there was not bedding sufficient supplied. But the worst feature was that, despite the scarcity of room, and much of the exhibition stock had of necessity to be kept out of the grounds, there was a very large space occupied by the Model Farm stock, which was to be sold by auction on the last day of the exhibition. These animals, although in many cases much inferior to those owned by the regular breeders, was an allurement to purchasers and prevented our breeders making the sales they usually do at this exhibition. They considered that they were paying a tax to support this institution and it was injuring them in the sale of their stock. No doubt the directors had short-sightedly thought to increase their popularity by getting the stock on the ground and getting the gate money from those who wanted to purchase. They are to be condemned for not looking first to what is of benefit to their patrons, that is, to the exhibitors of stock, for without them what would their exhibition be? Had this Board looked first to your interest they would and should have acted differ-

ently. Is this the proper step to take for the encouragement of private enterprise?

We entered the main building and got a pretty good squeeze by the crowd that was trying to pass both ways in the same narrow passages. We saw the great inconvenience and even danger of this plan, and took the trouble to go to the President and ask him to have proper arrangements made so that the people would only pass one way. That business did not belong to him—Mr. So-and-so must attend to that. It was not our place to hunt up this subordinate, but we spoke to another member of the Board, an M. P. P. He slighted the suggestion even worse. We gave them no more suggestions.

One of the most interesting exhibits in the main building was a display of minerals, fossils and plants, made by Mr. D. Boyle, late Principal of the High School at Elora, among which was a fossil tooth of an elephant. This tooth, which weighs 20 lbs., and a pair of fossil tusks weighing 200 lbs., were found at the mouth of the Grand River.

It had been announced that a trial of implements was to have taken place, but this part of the programme did not come off. Of course that was nobody's business, but there were some who had come specially to see that trial, who should have had their expenses paid.

Scattered through the exhibition ground, in the midst of the stock, between and around the machinery, and everywhere, were to be found side shows, tents, quack medicine vendors, "Aunt Sallies," shooting ranges, jewelry vendors—anything and everything that should not have been allowed in the midst of the exhibition. But the greed for cash by the Board of Directors was so great that notwithstanding the \$10,000 grant, such despicable means to get pelf were resorted to. We have touched on this before, and think that those members who sanctioned such proceedings as we have and can yet depict about this exhibition, should be strictly called to account; and those who cannot justify themselves should be removed from office. We know too well the devices used by members of this Board; they will each try to lay the blame on others or on the Board. The grounds were not half large enough to accommodate the exhibitors and visitors, and they knew this. Then why let it be taken up by showmen, vendors, and auction sales, to the detriment and hindrance of the proper purposes of the Provincial Exhibition, which should be conducted as a pattern for others. We pity any township exhibition that attempts to follow such a standard bearer. Why, in the horse ring we saw horses standing that had been exhibited, but the first prize ticket was placed on an unsound animal—so unsound that it could be detected a quarter of a mile away. In grain the highest prizes have been awarded to wheat that is the most unprofitable to raise. In stock we heard one director ask a partizan friend, when stock was being exhibited, which was his animal. That animal by some means was awarded the prize. (Don't ask too much!)

The annual meeting of the Board of Agriculture and Arts was held on Wednesday evening. The power that was once placed in the delegates' hands is now taken from them, and is vested in the Board, and to such a low ebb has the Provincial Association descended that the great business of the evening consisted in a resolution being moved by one of the oldest members of the Board to ascertain the opinion of the meeting as to whether the Provincial Exhibition should be continued another year or not. We believe that the present Minister of Agriculture desires to do what he can for the benefit of agriculture and for popularizing the Agricultural College and Board of Agriculture; he has stepped into a chaotic slough, from which time alone can show whether he can bring order and good out of it or not. It is not the expenditure of money that must do it; there is and has been enough of that already. It is the expenditure of brains that must do the good.

We met the Hon Jas. Young on the grounds. He spoke in highly flattering terms of your journal, the FARMER'S ADVOCATE, admitting it to be the best agricultural journal in Canada. As he has been a subscriber for many years, he has had

an opportunity of judging of its merits. He expressed himself as desirous of making the Model Farm more beneficial and popular than it now is. The farmers' interests would be the first and main object we wished to obtain information about, and he at once endeavoured to gain it for us, putting himself to some inconvenience for that purpose. Many have erroneously looked on our writing as being opposed to the Provincial Exhibition and the Model Farm, because we have exposed some of the mismanagement of these institutions. Our object in doing so is that they should be improved. It is the continuation of mismanagement in them that has tended to bring them both into such low repute, and it is to improved management alone that we must look for the popularizing of these institutions. We are ready and willing to lend our aid to their improvement, and we know that all our readers would desire this. You have the opportunity of expressing your approval or disapproval of our attempts, both in our columns and in your support. If errors exist and they are not amended, you have yourselves to blame, for we never decline to publish our contributors' opinions, even though they may differ from our own.

The Society made one improvement, and that was in furnishing a catalogue of stock exhibited, with the owner's name.

In the exhibition of sheep, we noticed that several had their fleeces colored by a mineral substance. This coloring did not prevent them from taking prizes. Whether artificial coloring should be allowed or not is a question that should receive the attention of the Provincial Board. Our opinion is that it should not.

The Directors had caused the allurements to be held out that the electric light was to be seen. In the evening an attempt was made by the police to drive the visitors off the grounds, so as to compel them to pay another 25 cents each. They succeeded in driving some out, while others would not go. Guelph is a good place in which to hold an exhibition, the accommodation for visitors being better than we anticipated, and the Exhibition was a success.

The Government Sale of Stock

Took place on the Friday, the day that stockmen generally expected to make sales on the ground. It caused a desertion from the exhibitors' stuff. There were some good stock sold, consisting principally of Polled Aberdeen and Hereford cattle. Some stockmen regretted they had not purchased them at higher figures, although to the common farmer the prices offered for some seemed fabulous. For instance, a Polled Aberdeen calf brought \$650, while the principal part of the other stock sold was not such as our breeders of first-class stock wanted, still there were many good beasts that would improve the general stock of the country. The sheep were not as good as the cattle. The Cotswolds were considered good, but the quality of the wool was not what they wanted. We met one good breeder of Cotswolds who came a long distance on purpose to purchase, but after examining the best, said he would not put one of them on his farm. The sale was considered an excellent one by stockmen, judging from the quality of the animals sold, and with very few exceptions high prices were received, quality being considered. The stock was sold as advertised, without reserve, and the attendance of such a large number of stockmen would ensure the full value being offered, as many beginners and speculators were there.

The stock was the surplus of the farm and animals which had to be sold to make room for fresh importations. It comprised two hundred and sixty head of fifteen distinct breeds of cattle, sheep, pigs, and dogs. The sale began with Mr. A. Taylor, of Guelph, as auctioneer. A large crowd of buyers and others interested densely crowded around the ring, and stood hour after hour, catalogue in hand, noting the progress of the sale or putting in bids. At times when a famous animal was offered excitement ran high, and bid after bid was rapidly made amidst the very perceptible flutter of interested spectators. Eight Shorthorn cows or heifers and one bull calf sold for \$1,101. The six Hereford females and a bull sold for \$1,775. In Aberdeen Angus Polls, of which a very fine lot were offered, the competition was very keen. Most of the animals were bought by Americans. Donside Lass, a

heifer, went for \$525 to Geary Bros., of London Meldrum, a three-year-old bull, sold for \$700; and the Marquis of Huntly, a bull calf found a Nebraska purchaser at \$550. The prices paid show the success attained at the Farm with Aberdeen Polls. The four females of this breed realized to the Farm \$1,545, and the two bulls \$1,250. The four Devons brought \$351. The Ayrshires being either very old or very young, did not sell at large figures, the five females and four males selling for \$666. The Jersey cow brought \$205, and the bull calf \$102. The 18 grades sold for \$1,212. Of fat cattle one only was offered, the White Duke, a Shorthorn steer of two years and four months, with a weight of 2,010 lbs. The price paid was \$270. The 56 head of cattle brought in all \$3,477. The following are the cattle sales:—

SHORTHORNS.

"Rosalie 2nd," Jas McLellan, London, \$150; "Louan o Guelph," Thos Graham, Ottawa, \$210; "Louan of Wellington," Jas Rowand, \$118; "Lady Elizabeth," W Graham, Ottawa, \$170; "Cambridge Queen 2nd," Amos Cutler, Coldstream, \$160; "Lady Leonard," A Taylor, Dromon, \$75; "Rosalie 4th," A T White, Pembroke, \$120; "Louan of Gait," S Hogarth, Exeter, \$105; "A A C," John Tuft, Bake, \$145.

HEREFORDS.

"Princess Mary 2nd," L G Drew, Oshawa, \$310; "Heatherbell," L G Drew, Oshawa, \$360; "Heath rbell 5th," L G Drew, Oshawa, \$275; "Princess Louise," W Howitt, Guelph, \$250; "Princess Mary 4th," W Howitt, Guelph, \$230; "Little Lady," Dr A Norris, Spencer, N Y, \$140; "Hopdale" (bull), Oliver Duck, Hannibal, Mo., \$210.

ABERDEEN-ANGUS POLLS.

"Houghton Lass," O Duck, Hannibal, Mo., \$430; "Speyside Lass," O Duck, Hannibal, Mo., \$205; "Meldrum" (imp. bull), O Duck, Hannibal, Mo., \$700; "Donside Lass," Geary Bros., London, \$525; "Maid of Meldrum," T W Harvey, Nebraska, \$395; "Marquis of Huntly," T W Harvey, Nebraska, \$550.

DEVONS.

"Nellie," F W Rothera, Simcoe Co, \$90; "2nd General Wyndham," W Curtis, Darlington, \$50; "3rd General Wyndham," H Hawes, Guelph, \$50; "General Wyndham," H Hawes, Guelph, \$191.

AYRSHIRES.

"Beauty of Drumlanrig," T Fisher, Creekbank, \$180; "Stoncalsey," T Fisher, \$72; "Flora 3rd of Drumlanrig," D McNamee, Lansdowne, \$78; "Juno 2nd of Drumlanrig," Arch Kearns, Flesherton, \$86; "Beauty of Elora," Thomas McCrae, Guelph, \$42; "Flora of Guelph," C Howitt, Guelph, \$65; "Stoncalsey 3rd," T Guy & Son, Oshawa, \$52; "Stoncalsey 4th," W Giles, Howick, \$60; "Stoncalsey," T W Rothera, Simcoe, \$101.

JERSEYS.

"Princess Alexandra," A Jeffry, St Catharines, \$205; "Prince Bouilvot," A Jeffry, \$102.

OTHER CATTLE.

R Gibson, of Delaware, bought "White Duke," a two-year steer, of 2,010 lbs, for \$270. The following sales of grades were made:—W West, Guelph, four aged cows, at \$67, \$25, \$100 and \$49. Stewart Bennett, of Orangeville, aged cow, \$89. J Armstrong, Warkworth, aged cow, \$88. C Howitt, Guelph, seven-year cow, \$95; eight-year cow, \$81; heifer, \$92; Ayrshire grade heifer, \$41. B A Ramsay, Eden Mills, heifer, \$72. J Welsh, Ospringe, aged cow, \$40. G Taylor, Rockwood, aged cow, \$35. Ward Langdon, Arthur, heifer, \$71. John Nelson, Orillia, Aberdeen Poll grade five-year cow, \$60. J Evans, Puslinch, A P grade heifer, \$83. T Motokindale, Paisley Block, a bull calf, \$80. J Renselson, Gait, cow, \$64. All the grade females mentioned excepting the purchase of Mr Evans are in calf.

(For continuation of sale see page 300.)

Live Stock at the Provincial Exhibition

As was generally expected, the holding of the Provincial Fair in such a great stock centre as Guelph called out an unusually large display of first class stock, and very keen competition. Indeed, we believe it was the general opinion, that as an agricultural and stock exhibition it has never been equalled in Canada. Preparations and provisions for stock were made on the basis of the largest exhibit of former years, and allowance made for an excess over this, but it was found that after all had been done, the accommodation was entirely inadequate and the management found it necessary to run up some four hundred feet of extra cattle and sheep sheds after the opening of the exhibition. This was partly due to an unfortunate blunder on the part of the Board in allotting to the Agricultural College two large sheds for their annual sale, which was held on the grounds, thus throwing exhibitors out till the extra accommodation was provided. This very naturally caused a great amount of complaint, for it was simply an outrage on exhibitors who make the show. Another cause of complaint in regard to the management was the insufficient supply of straw for bedding for the stock. It is a great mistake for the superintendent to adopt a niggardly policy in respect to making the stock comfortable and keeping them clean, and does more to sour the minds of exhibitors than almost any other cause.

HORSES.

The show of horses here was even larger and better than at Toronto, great as it was there, some

thing over a hundred animals coming here from the west which were not at Toronto, and many of them of a very high class of merit. The Clydesdales were again in the majority, and made a very grand display, but there was a much better representation of both the agricultural and the carriage classes at Guelph, where the heavy draughts have not been so much sought after till recently. The judges in these classes, we believe, on the whole, made fairly good work, though it was thought by many competent critics that both in the sections for four-year-old and three-year-old imported horses, decisions were made that might well be reversed without doing injustice to any one.

CATTLE.

The Shorthorn class here was supplemented by quite a number of good things which were not at Toronto, and there were a few good things at the latter show that were not here. Conspicuous by its absence was the 1st prize herd at Toronto, and which was entered for the Provincial as well. The question was frequently asked, Where is the herd that was placed first at Toronto? and "echo answered, Where?" The Prince of Wales' prize of sixty dollars was here offered for the best herd of Durhams, a prize well worthy of competing for, amounting to more, both in money and in fame, than anything offered at Toronto, and it would naturally be supposed that the owners of the winning herd at the latter place would have been ready for the pay again, and anxious to add to their laurels the Prince of Wales' prize, but they seem to have thought it safer to act on the principle that

"He who fights and runs away, may live to fight another day."

We believe the judges on the class of Shorthorns, at Guelph, besides being tolerably competent men, were actuated by a desire to do right, and that they judged the cattle to the best of their judgment of their individual merits, and if in a few cases they erred, as, we believe, some disinterested stockmen thought they did, it was more a matter of difference in tastes, or, perhaps, from the fact that in some cases a view of the animals from the outside of the ring gives a better idea of their general make-up than can be got in a crowded ring, where the animals are so close together that a good side view cannot be obtained. Here the prizes in this class were divided between the Messrs Watt, Hunter, McQueen, Dryden, Armstrong, Fothergill, Green, Snyder and others, the first named gentlemen being the largest exhibitors and winning the largest number of prizes, including the Prince of Wales' prize, for the best herd of one bull and four females. The sweepstakes for best bull of any age was awarded to Messrs. Watts' aged bull, "Barmpton Herd," a decision from which many of the breeders were disposed to dissent. The old bull, no doubt, has been a good one, and is yet a good one for his age, and has made a good record as a sire, but he has evidently seen his best days, and there were first prize bulls in the younger classes that might well have been placed before him, and the decision, we think, would have been more generally approved. In the ring for two-year-old bulls the decision at Toronto was reversed, Mr. Green's "Earl of Mar" being placed first, and Mr. Fothergill's "Prince James" second, we believe, without doing violence to fine judgment, though both are so good and grand, we may say, in their widely different styles, that it is much a matter of taste which should win. Mr. Dryden's excellent young Cruickshank's bull, "Lord Glamis," deservedly won first in the yearling rings, as he should have done at Toronto, the winner there being prudently left at home as the safer place for him.

The calves' rings were not so largely filled as at Toronto, but were even more select, and the prizes somewhat differently distributed, the first prize going to one that did not get a place at Toronto, while the first prize calf there got no place here, which was clearly a difference in judgment, a not unusual thing in this ring, where so many good ones are shown, and the diversity in age and condition is considerable. The Messrs. Hunter, of Alma, who did not show at Toronto, made a good show of calves here, the get of their imported Booth bull, Socrates; and many were of opinion that they should have got a better place than third in the bull calf and heifer sections.

The sweepstakes for best Shorthorn female of any age, went again to Messrs. Snider's superb three-year-old cow, and the diploma for best four calves by one sire to Messrs. Watt's calves sired by Barmpton Hero.

In the Jersey classes the competition was again between the herds of Mr. Fuller and Mrs. Jones,

with very few exceptions, and here the three judges made sad havoc with the work of the American expert who placed them at Toronto; the third prize cow at the latter place being put first here, which, by the way, was Mr. Cooper's judgment also, as he said in his report, but for what he considered a defect in the appearance of her hind teats when her udder was full, but which does not show when it is not distended. The herd prize was also reversed, going to Mr. Fuller here, but Mrs. Jones was made happy, on the other hand, by her yearling bull "Florist" taking first place for sweepstakes over the far-famed "Thalma," and the youngster is certainly the coming show bull, if he has not already come to stay in that position; his soft, velvety skin of rich golden color, is something far away ahead of anything we have seen or felt in that line.

In the other breeds of cattle the competition was almost entirely the same as at Toronto, and, except in the Ayrshire class, the prizes were placed nearly as they were there, a good many changes being made in the decisions in Ayrshires. Galloways and Herefords, however, were out in greater numbers, this being the home of the two largest herds of these respectively in the Province.

A report of the cattle would be incomplete if we did not notice the grand show of fat steers, Shorthorns, and their grades, shown by the Messrs. Groff, McQueen and John Russell, the latter showing a pure bred Bates' heifer, weighing 2,200 lbs., and the first named firm a cow of wonderful quality and finish, besides a group of steers that would do credit to any feeder and to any show in the world.

THE SHEEP.

The sheep show at the Provincial was probably the largest ever got together in Canada, and in respect to quality and merit it is not too much to say that it was strictly first-class in all the breeds represented, excepting only the Merinos. The Leicesters being near home, turned out immensely, and the Downs were about the same as at Toronto, as also were the Cotswolds.

PIGS.

made a larger and a better show than at Toronto, owing partly to a more liberal prize list, and partly to the fact that a good many local breeders came in to try their luck, but with very few exceptions the prizes went where they did at the Toronto show, and exhibitors made few complaints against the judgment dispensed.

Special Contributors.

English Letter.

[FROM OUR OWN CORRESPONDENT.]

Liverpool, Sept. 17th, 1883.

The Canadian cattle trade has just undergone a severe ordeal, and I do not hesitate to say that but for the exertions of the Dominion Agent General, Sir Charles Tupper, and, in scarcely an inferior degree, of the Liverpool agent, Mr. John Dyke, it would have received almost a fatal blow. As your readers are no doubt well aware, Canadian cattle, and Canadian cattle only, have now the privilege of entering this country alive, and being moved from market to market according to the demands of trade. All the States cattle, and those from the continent, have to be slaughtered in the lairage at the port of debarkation; and this restriction is frequently, and especially in hot weather, of the most irksome and serious character: a temporary glut in the market involving the importers in heavy losses.

The cattle trade generally, and with it the Canadian live cattle trade, has been considerably depressed of late, and I hear on good authority that some of the dealers have been hard hit. Still, the privilege enjoyed by Canadian cattle is so valuable that any menace to it was a matter for serious alarm; and when it transpired, on the 24th ult., that the Dominion steamer "Lake Nepigon," which brought some 200 head of Canadian cattle which had been detained by order of the Privy Council Inspector here, Mr. Moore, on suspicion of splenic fever, the greatest consternation prevailed throughout the trade. The Privy Council in London at once sent down one of their chief inspectors, who examined the carcasses of several of the cattle

which had been slaughtered. He at once exploded the idea of the terrible splenic fever, but declared in favor of Texan fever. Sir Charles Tupper, with whom Mr. Dyke had at once communicated, saw the authorities and obtained a withholding of the fiat, which would have declared Canada an infected country until a further investigation had taken place. Eminent veterinary surgeons were summoned from all parts of the country, and on Monday, the 27th August, a thorough inspection and examination of all the animals by the "Lake Nepigon," and of other cargoes of Canadian cattle which had arrived in the meantime, was made by Sir C. Tupper, assisted by the Government Inspectors, Mr. Dyke, and the eminent veterinary authorities who had been called in. The result was a complete vindication of Canadian cattle from all taint of disease, and the only justification for their detention was declared to be some little irritation caused by the drinking of condensed water on board ship, and the other adverse influences of a summer voyage across the Atlantic. The escape was a narrow one, for if the representatives of the Dominion had not been so prompt and energetic in their action, there can be no doubt that the Privy Council would at once have acted on the reports of their inspectors, erroneous though they were, with most disastrous results to a trade which is already suffering some depression.

During the past week the Royal Manchester, Liverpool and North Lancashire Agricultural Society, one of the most important in the provinces, has been holding its show in Newsham Park in this city. It lost much of its interest, however, through the withdrawal, at the last moment, of cattle, sheep and pigs, consequent on the prevalence and rapid spread of foot and mouth disease. The show of horses, however, was good in all classes; proving that, notwithstanding the large export to Canada and the States, we have still a respectable stock left. A conspicuous feature amongst the general exhibits was the highly interesting stand under the supervision of the Dominion agent here, Mr. Dyke, which received a special visit from Lord Derby, the Colonial Secretary, who expressed himself much interested with the evidences before him of the resources and industries of probably the most progressive section of the Empire. Mr. Dyke was awarded by the judges a silver medal. The distribution of literature at the stand reached enormous proportions.

Special prizes were offered for Canadian cheese and butter, but, although this was extensively made known in the Dominion, not a single exhibit was made. Where is your enterprise?

The vicissitudes of the season from a farmer's standpoint, have, in this country, shown but little improvement on the long series of bad years which have ruined thousands of British agriculturists. The spring was too dry, the summer too wet, and the autumn, so far, has been too uncertain; two or three fine days and two or three wet ones, alternately, with a perplexing regularity. A fortnight's fine weather in the latter end of August enabled farmers with machinery, in the earlier districts, to get a large breadth of grain well harvested, but where hand labor has mainly to be depended on, and in all the later districts, the outlook is most unpromising. The potato crop generally is the best for many years, but disease is beginning to show itself in many districts, and there is still time for vast mischief to be done.

I have already mentioned incidentally the outbreak and spread of foot and mouth disease in this country. Over 29,000 head were affected last week, and the disease is spreading with amazing rapidity. There is no doubt that it is being imported from Ireland. It is stated on good authority that a few years ago Ireland was entirely free from

this scourge, and its re-introduction has been traced beyond doubt, to the introduction of one animal—a bull—from Liverpool, and the disease is now rampant from one end of the Island to another. Some thirteen districts, governed by the local authorities in England, have now decided that no Irish cattle shall enter their localities alive. In Scotland they are still more severe, and will not allow any Irish cattle to stand in the Glasgow markets. If this continues a dead meat trade will spring up between England and Ireland; and the only rivals the Canadian importers will have if Canadian cattle keep clear of disease, in the interior markets here, will be the English breeders.

An important shipment of black polled cattle takes place at the end of this week; some 24 of the best to be obtained are to be shipped by Mr. George Wilken, of Waterside-of-Forbes to the order of the Hon. J. H. Pope, Minister of Agriculture; but probably the most important shipment ever made to Canada is that now being made by Mr. Hiram Walker of Windsor Ont. Mr. Walker sends 2,000 to 3,000 head of cattle every year to the English market, and, having experienced great difficulty in obtaining suitable stores, he is now taking out 30 polled Aberdeen bulls, with the intention of giving their services free to farmers in the Windsor district, requiring only in return the refusal of the bull calves, the females to be allowed to remain in the district. This is a most valuable step, and it is to be hoped that Mr. Walker's example in this respect will be followed by other extensive traders, who will thus grant a great boon to the smaller farmers, whilst they consolidate and improve their own trade.

Agricultural Affairs in Scotland.

[FROM OUR OWN CORRESPONDENT.]

Scotch farmers are meantime looking forward anxiously to the coming of harvest, which this year will be fully two weeks later than usual. There is a good promise of cereal crops, especially of oats, after lea and barley; but what is here termed the "clean land crop"—that is, the crop grown after turnips or potatoes, is light. Reaping will not be general in the north of Scotland until the second week of September, and in the southern counties about a week earlier. A late harvest is seldom a profitable one in the north, because the crop in the cold and backward districts is often spoiled by frost and snow before it can be secured. Never was there a more abundant appearance of potatoes, of which a magnificent crop is expected, and, as yet, they appear to be quite free from disease. The greatest deficiency this year in the crops is among turnips, which, taking the average of the country, will give a very poor yield, in many instances not more than a third of an ordinary crop. This is the most expensive crop raised in Scotland, and the loss to the farmers therefore will be very much felt, more especially in such districts as Aberdeenshire, where it is used largely in preparing cattle for the fat stock markets. Pasture has been abundant of late, wet weather favoring its growth, and, as a consequence, cattle will be stalled in good order next month. Hay, which is fully a third below average, has been greatly spoiled by heavy rains, and the crop will be sadly deficient in color, quality and quantity.

Our great national show of stock, held under the auspices of the Highland and Agricultural Society of Scotland, took place last month at Inverness, and although concomitant circumstances were not favorable—restrictions on account of foot and mouth disease in the south, bad weather and an out-of-the-way locality—the exhibition was fairly successful, not only in regard to the quantity, but the quality of the stock. The total number of entries was 1,037. The show was weakest in Clydesdale horses, which are not yet reared so extensively in the north as in the south of Scotland, but they are gradually gaining a hold even in the far north, as farmers are now finding it profitable to breed this class of "cattle," for which there is a good demand from America and the large cities in our own country. The display of Shorthorns, though confined chiefly to the northern counties, was worthy of the occasion, the total entry being 72, as compared with the same show at Glasgow last year. Bulls, however, with the exception of

a few of the winners, were scarcely an average lot. The prize for the best Shorthorn in the yard was won by a Morayshire breeder, Mr. James Bruce, Broraside, for a splendid one-year-old roan named Gold Finder, bred by Mr. Handley, Greenhead, England, after a noted bull named Sir Arthur Ingram. Gold Finder, though rather open in the side, is an animal of immense size and substance, weighing 14 cwt., while he is straight, well-fleshed and has a nice coat of hair. Had he been entered for the Royal English Show at York, he would have had no difficulty in beating any of the exhibits which appeared in his class, for none of them, in my opinion, could be compared to the bull from Morayshire. Polled Aberdeen or Angus cattle, of which there were 93 entries, as against 68 at Glasgow last year, was the best feature of the exhibition, the classes being large, the merit well sustained, while several of the winners were considered as fine specimens of this popular breed as have been shown for several years. Perhaps the most notable animal of the Polled breed in the yard was a three-year-old bull named Black Knight, out of a "Pride" cow, and the property of Mr. Farquharson, of Houghton, Aberdeenshire, which has not been beaten this year. His symmetry and shape are perfect, and his style, fine bone and evenness of flesh, are those of a real typical "poll." In a very superior class of yearling bulls, Liliad (the property of Mr. Argo Cairdscot) took leading honors, as he did also at Aberdeen, and his sweetness of flesh, nice covering above, well entitled him to his place. A very massive five-year-old "Pride" cow, with beautiful cover of flesh and great fore-end, for which, with a calf, her owner (Lord Tweedmouth) refused an offer of 1,000 guineas, led in a good class of cows. Some judges thought the second best representative of the Polled breed was a two-year-old heifer with fine, arching, deep rib, great substance and wealth of flesh, and a remarkable development for her age—named Waterside Matilda II, which was exhibited by Mr. Wilken, Waterside-of-Forbes. She was got by a "Pride" bull, Knight of the Shire, and she occupied the front place in her class here, as she also did at Aberdeen. Ayrshire and Galloway cattle were not largely represented, there being only 28 of the former and 24 of the latter; but there was a fine turn out of Highland cattle, the total entry being 85 as against 67 at Glasgow in 1882. In the classes for Clydesdale horses there was a decrease of 100 entries, and the quality, with the exception of about 30, was much on an average of what one sees at Glasgow and Edinburgh when this show falls to be held at these places. The decisions of the judges of horses were much criticised, and one exhibitor was so much displeased with the unfair treatment he thought he received that he withdrew all his horses from the show yard before the exhibition closed, paying a penalty to the society of £2 for each horse for doing so.

It may interest some of your breeders to learn that foot and mouth disease has been completely stamped out in the northern counties of Scotland—Kincardineshire and Aberdeenshire, Banff, Nairn, Inverness, and all the counties to the north of Inverness being free.

Aberdeen, Aug. 22nd, 1883.

A Chatty Letter from the States.

[FROM OUR CHICAGO CORRESPONDENT.]

Fairs and agricultural displays of all kinds are in active operation throughout the country. There are some who are of the opinion that fairs as generally conducted are of little real worth to the agricultural community which gives the solid support; that more attention is paid to horse-jockeys, pool selling and various catch-penny and advertising schemes, than to the forwarding of the material interests of the agriculturists.

It is a lamentable fact that the real object of fairs, the promotion of farm and stock interests, the bettering of breeds and methods, the exhibition of improved implements, and the elevation of standards of excellence all along the agricultural line—it is painfully true that the real object is so often set aside, and made secondary to the interests of the large class of professional gamblers and dead-beats who try to make their living with their coats on.

The tendency of fairs is too much to fast horse

racing; we need fast trotters, but far more does the general country stand in need of fast walkers. How many horses are to be found that can walk as fast as they ought? Not many. That is something too tame for encouragement by the gamblers; it lacks excitement and is not encouraged by the betting fraternity. It is something, however, which ought to be attended to by the managers of fair associations. Trotting and walking bear about the same relation that pretty parlor accomplishments bear to thorough knowledge of house-keeping; the former are highly desirable as accomplishments, and for use on occasions, but the latter is called into play every day.

Our girls must have the pretty parlor accomplishments, and our horses must be able to hold their own to the buggy or under saddle, but the girls must first become proficient in the knowledge of household economy, and the horses must be at their best before the plow or load of grain.

The one-judge system at fairs and fat stock shows is apparently gaining in favor in some sections; it is argued that one thoroughly competent judge, one of some reputation as a judge, and one perhaps who will require a big salary for services, will be more generally satisfactory than a larger number. At a poultry exhibition last winter an expert judge was paid the sum of \$20 per day and expenses to award the premiums. It seems reasonable to suppose that it is easier to get one thoroughly competent judge than five or three, or a larger number, and while some object to one man having so much responsibility, it is an indisputable fact that when any number of judges is passing upon an article or pen of stock, the decision of the whole often depends upon a single one.

But after all, a judge to please everybody would have to be one who had blue ribbons enough to bestow upon every entry.

In Texas a very severe drouth has been experienced this summer in the southern and western portions of that State, and the losses to stockmen in consequence have been very great. Many sheep men have become discouraged, and before the recent heavy rains which gave the range its wonted color of green, and refreshed the dried up streams, there were many who either sold out at a sacrifice, or moved their flocks to pastures new. The one great want on the plains is that of water. This, too, is a want, when it is wanting, that is the hardest of all to supply. However, the railroad companies are able by the sinking of artesian wells to have water about wherever they want it, and it is thought that in time, the "Staked Plains" in Texas, which are as dry as Sahara in this kind of a summer, can eventually be reclaimed by the introduction of these wells. At present, while there is such a vast amount of unoccupied territory, stockmen do not seem inclined to go to the heavy expense of supplying water in that way.

It is an old Spanish proverb that "short grass makes fat cattle." The truth of this old saying has been very clearly demonstrated in the west. This year, particularly on the far western plains, the rain fall has been heavy and the growth of grass about the heaviest on record. In fact it has been so rank that there are fears that the hay will not have time to properly cure for winter feed, and yet the cattle are fully two months later than usual in getting to market, and are generally lacking in solid fatness, though as a rule they have fattened in a way that does not last till they have travelled a thousand miles or more to market. They are soft and "shrinky."

A vast amount of hay is being cut on the plains and stacked for winter use, and a great many of the ranchmen have become so discouraged with the method of marketing grass beeves, which compels them to crowd their cattle to market in great numbers in the fall of the year, and gives buyers such great advantages, that many have provided for hay, corn and distillery slop feeding. One firm of Wyoming cattle raisers has bought a tract

of ten thousand acres in the corn growing part of Nebraska, and proposes feeding a large part of the annual beef crop till after the rush to market of ordinary grass cattle is over. This will enable them to hold and market their beeves in the winter when the market needs them. Ranchmen do not find it very easy to accustom wild cattle to coming up to hay stacks regularly for their winter feed, and the same trouble is experienced with getting range cattle started on corn or slop. They have to be educated up to it at first.

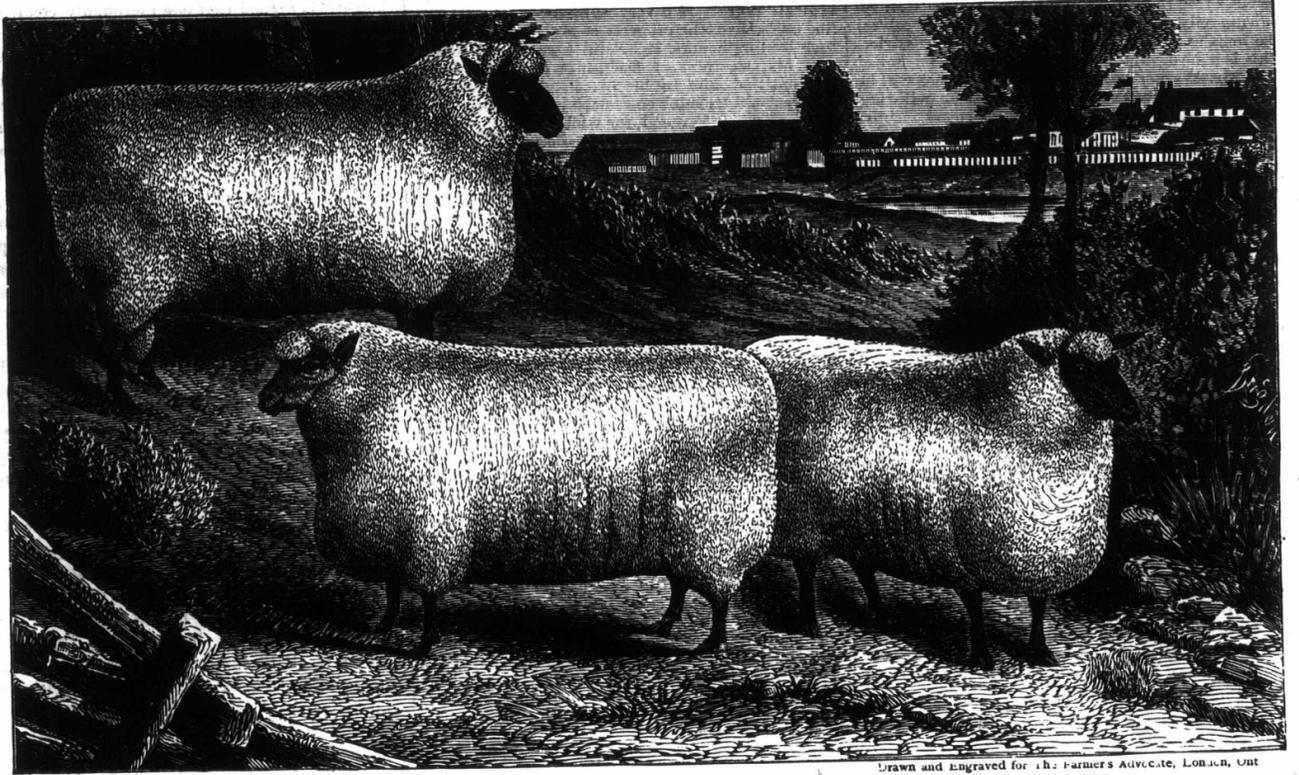
Great trouble is being experienced by large cattle corporations in the west in maintaining their wire fences. In the Territory of Wyoming, where the grazing land is all public, the Secretary of the Interior has declared all fences put up by stockmen to be illegal, and has directed steps to be taken to remove all that exist, and prevent the erection of any more. "The public land in that Territory is reserved for agricultural purposes, and is of little use to stockmen who want to buy and fence, because they cannot buy more than a section in one place. It is a rule which is working very badly for the stockmen who could make use of the land, and the rule is of no benefit to small farmers, because nothing can be raised there ex-

are in course of construction in the State of Texas, three slaughtering establishments, whence it is proposed to send dressed beeves and mutton at all times of the year to the consuming markets. There is a similar concern being established at Cheyenne, Wyoming, and there is a keener interest being taken in that kind of business than ever before. It seems to be but a question of time, and not very much time either, when the bulk of the meat supply will be forwarded in the quarter in refrigerators instead of making wearying, sickening journeys on foot. By the way, there is a good deal of monopoly in the dressed beef business as at present conducted; in fact, there is rather a dangerous disposition on all hands to concentrate capital.

Feeders must not forget the importance of making pounds while the favorable weather lasts. It pays to crowd fattening animals at this time to the utmost. They fatten much more readily now than they will when the cold of winter consumes a large share of the feed to maintain animal heat. Young stock, and all kinds, should be pushed as rapidly as possible before cold weather comes. If made fat now it will be much easier to continue them in good condition through the trying winter.

came and purchased his entire stock of show Cotswolds that he had prepared. The family are industrious and careful, and have devoted their attention to raising the best class of sheep for half a century, and have done much good to Canada by their exertions; but they complain very much about the injurious effects of the sales at the Model Farm, and say that inferior stock has been sold there at lower prices than their good stock could be raised for, and that it has injuriously affected their business. We wish prosperity and success to every independent, enterprising farmer, and hope that Mr. Arkell will long be known as favorably as a breeder as his father has been.

The animals shown in the engraving are all imported stock. The first is the ram, Duke of Hatherop, tag 25; the second is the three-shear ewe Lady Oxford, and the third the yearling ewe Maid of Fairford, bred by Mr. W. Arkell, of Hatherop, Fairford, Gloucester, England. These sheep were highly commended at the Royal, of England, in 1882, and since they have been in the country have taken first prizes at Toronto, Kingston (Provincial), Guelph (Provincial), and London. The Oxfords have been a distinct breed in England for upwards of sixty years, and were origin-



A GROUP OF PRIZE OXFORD DOWN SHEEP.
THE PROPERTY OF HENRY ARKELL, ESQ., OF FARNHAM FARM, ARKELL P. O., NEAR GUELPH, ONT.

cept by irrigation and at great cost.

In the southwest the land laws are different. In Texas the land is owned by the State, and any quantity can be purchased and fenced at will. But the fences are not so easily kept in place, for there is a great antipathy to them by a large number of small stockmen and one-horse farmers who do not want to have their water privileges cut off by wealthy corporations; in consequence there has been a great deal of wire cutting, and no end of trouble for the huge companies which fence in hundreds of miles of territory, and debar the small fry from the water and range privileges which they have hitherto enjoyed.

There is a very marked tendency in the west to the concentration of capital in stock-raising. The powerful corporations that have been formed are a menace to the interests of the men of moderate means.

Dressed beef establishments are the order of the hour in the far west. Ranchmen have seen the success of shipping beef from Chicago to the sea and beyond in refrigerator cars, and they argue with much reason that if it is profitable to cut off one thousand miles of the live animal's trip to market, it will be profitable to cut off two. There

Mr. Henry Arkell's Farm.

The above illustration was drawn by our artist on Mr. Henry Arkell's farm, situated four miles from Guelph. The land is rolling and some of it inclined to be shaly, having flat stones, though not sufficient to injure the land. Mr. Arkell's father was one of the oldest settlers; he erected more farm buildings on this farm than we have seen on any other. They were small, but comfortable, and answered an excellent purpose. He had one of the finest flocks of sheep we had ever seen in Canada, used to raise large crops of turnips, a great deal of rape, and kept his sheep in fine condition. He did much toward giving Guelph the name it now has as a stock centre. His son still continues to raise the Cotswolds, and has now added the Oxford Downs to his flock. He has obtained such a name that Americans purchase most of his stock. He had a very fine lot of breeding stock when we were there, and also a large lot fitted for the Exhibitions. An American

ally a cross between Cotswolds and Hampshires. A correspondent to a contemporary writes of them thus:—"The Oxfordshire Down as mutton sheep is always ready for the knife, from early lambhood to adult wetherhood. The Southdown or Hampshire Down may do where you are close to a good market, but I think there is one breed of Down sheep that excels each of the others named in size, early maturity and hardness of constitution, in addition to yielding a much heavier fleece than any of the other Down breeds, and that is the Oxfordshire Downs. I have proved this to my own satisfaction, having handled all the breeds of Down sheep, but none with as much success as the Oxfords. I am not prejudiced in favor of any breed of sheep, and think the Hampshire and Southdown both excellent breeds. What is wanted is the general-purpose sheep, and for all purposes the Oxfordshire Down is the most profitable to the general farmer. They are heavy wool producers, our flock of fifty two-year-old ewes having averaged 12½ lbs. this year, and our rams as high as 16 lbs. We have several ewes in our flock that weighed 250 lbs. at fifteen months old. The Oxfordshire Down is ready for the knife from a lamb of twelve weeks old to a sheep of any age;

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even the old ewes, when too old for breeding, fatten rapidly. They cross splendidly with any breed, and there is none but what they will improve. They are well adapted to any country or climate. The demand for these sheep in England from other countries is greater than can be supplied; nearly one-third of the Oxfordshire rams going to Germany this year to cross on the Merino, besides a great many going to Scotland, America, and other countries. The price of these sheep is advancing every year, owing to the great demand. This year's ram sales were much higher than those of last year in England."

On the Wing.

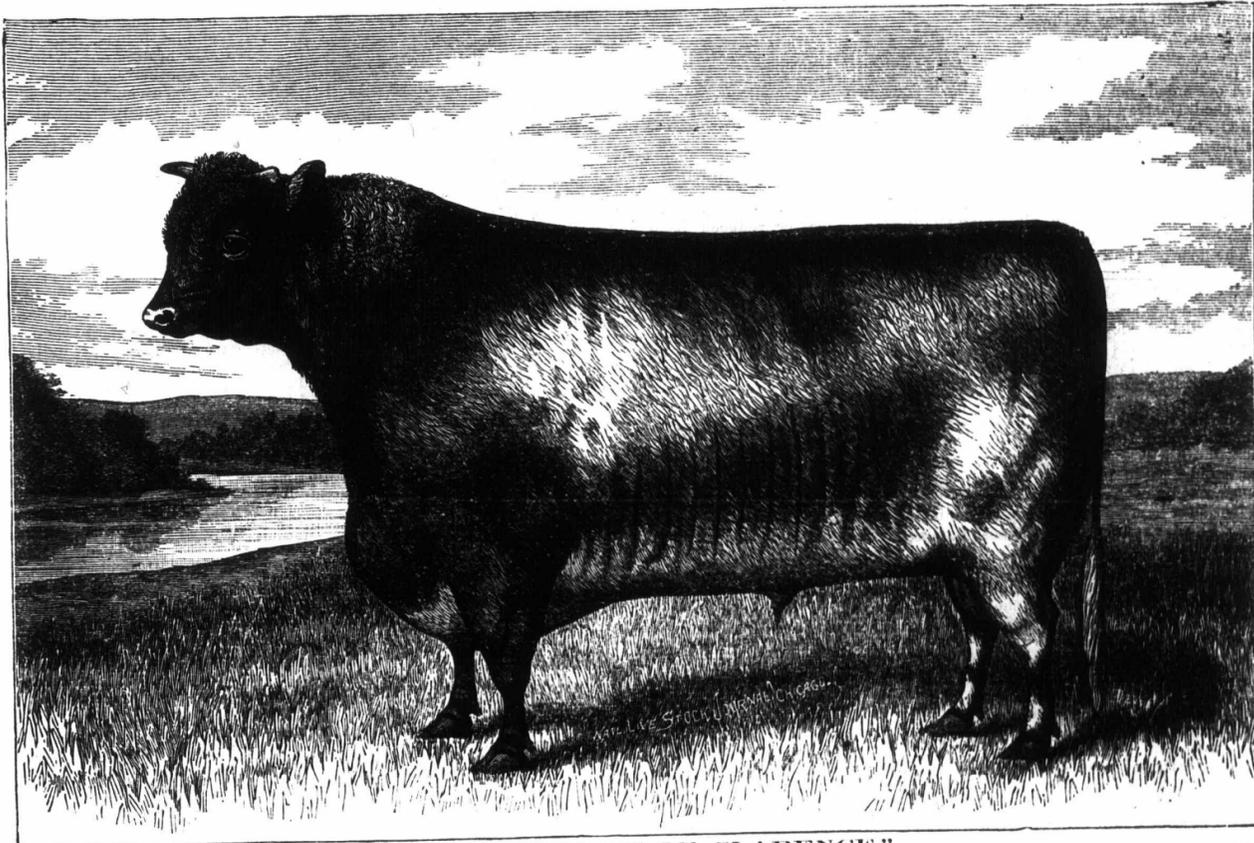
On the 6th Sept. we alighted on the Bow Park farm, situated in the county of Brant; it is about three miles distance from Brantford, on the west bank of the Grand River, which borders the estate for many miles. Upon this farm the late Hon. George Brown attempted to build up the most noted herd of Shorthorns (to use his own

connected with the farm is for the breeding and improvement of Shorthorns. When the attention is given to one particular object it is more likely to be a success than when divided. We do not know of any other farm where such a fine lot of really choice cattle are to be found. We saw no culls, or sick or poor looking animals on the place. Fourth Duke of Clarence, the bull standing at the head of the herd, is a model of perfection, both in form, pedigree and as a stock producer. The price paid for him, \$11,000, should command the best in the world. Seven thousand dollars was paid for one cow. The farm is well deserving of a visit by those who have a liking for these monarchs of our farms. Canada has much to be proud of in having such a breeding establishment as this. The attention of our best breeders is turned to it for the improvement of the herds of Shorthorns owned in different parts of Canada. But Canadians cannot afford to purchase all the fine animals raised on this farm; many are annually taken by Americans. It is a good thing to say that we have a farm from which people can depend on getting

Stock.

Combining Different Fodders.

It is customary on many farms to feed the cattle entirely on one kind of hay, such as clover, for instance, until that is gone, and then begin on another kind. In case clover alone is fed, the animals receive a much larger amount of proteine or albuminoids than their systems require, and consequently the excess is thrown off in the manure and wasted. If, instead of feeding on clover entirely, a portion of straw, poor hay, such as that grown on wet meadows, or cornstalks, were mixed with it, the cattle might be maintained in equally as good condition at a less cost, some of the poorer kinds of fodder being made to take the place of clover. This point is well illustrated by an experiment made at Moeckern, in Germany. Four cows were fed during a period of several weeks



"FOURTH DUKE OF CLARENCE."
THE PROPERTY OF THE CANADA WEST FARM STOCK ASSOCIATION, OF BOW PARK, NEAR BRANTFORD, ONT.

words) in this or any other country. The farm is now conducted under the name of "The Canada West Farm Stock Association." Mr. John Hope is the manager. We understand that Mr. Brown's family have but little interest in it at the present time, the principal shareholders residing in Great Britain. The estate consists of 900 acres, 500 of which are in pasture, and 400 under cultivation, 40 of which are planted with roots, and another large portion is used for growing green feed for soiling purposes. A large number of the cattle, especially the bulls, are kept in the stables all the time. A succession of green crops are arranged so as to have a constant supply from early spring till frost destroys vegetation. By this method of feeding the stock can be matured in about half the time that it takes an ordinary farmer. The manager appears to thoroughly know his business, and has a lot of first-class Shorthorns such as the best breeders would like to have. His attention is devoted entirely to this class of stock; he has all the necessary conveniences, and keeps everything in order, leaving all other breeds and classes of stock and outside speculation to others, and everything

more healthy stock than can safely be procured on any farm in the States, and animals having the best pedigrees, and this without any tax on the people to support it. We wish the Association, the manager and the stock every success.

Every Canadian who visited the Chicago Fat Stock Exhibition, last year, well knows that Canadians were disgracefully deprived of the high prizes they justly merited; and Americans know it too. Despite that treatment, Mr. Hope declares that he will stick to exhibiting at that Exhibition until he brings the champion prize from the States into Canada. We were much pleased to hear this determination, and feel satisfied that the feeling of dissatisfaction that was spread last year by the misappropriation of prizes has awakened such a feeling in the minds of the honorable Americans who attended that Exhibition, that a repetition of such work would raise the ire of Americans to such a pitch that, for honor's sake, the managers would not make the attempt. Their acts will be more closely watched. All that Canadians want, and all that any honorable American wants, is a fair field and no favor.

with all the green clover they would eat, amounting to 123 pounds per day, containing five and six-tenths pounds of albuminoids and 15 pounds of carbo-hydrates. During another period they were fed with 87 pounds of green clover and six and seven-tenths of barley straw daily, containing three and eight-tenths pounds of albuminoids and seventeen and eight-tenths of carbo-hydrates. The result was that the cows while fed with the clover and straw gave as much milk, which was as rich in butter and caseine, as they did when fed on clover only. The cost of the milk when the cows were fed on clover alone was fifty per cent. more than when fed on the clover and straw mixture. Here was a saving of about one-third in the cost of milk simply by combining straw and green clover instead of feeding clover alone. When the clover alone was fed there were nearly two lbs. of albuminoids per day fed to each cow more than was needed, and this was wasted, thus increasing the cost of the milk, the albuminoids being the most costly elements of food. No farmer can feed profitably when such a waste of fodder is taking place.—[New England Farmer,

A Complete Stock Barn.

The body of the main barn is 100 feet long by 50 feet wide, the posts 18 feet high above the sill, making 9 bents. The beams are 14 feet above the sills, which is the height of the inner posts. The position of the floor and bays is readily understood from the plan. The floor, for a grain barn, is 14 feet wide, but may be contracted to 12 feet for one exclusively for hay. The area in front of the bays is occupied with a stationary horse-power and with machinery for various farm operations, such as threshing, shelling corn, cutting straw, crushing grain, &c., all of which is driven by bands from drums on the horizontal shaft overhead, which runs across the floor from the horse-power on the other side; this shaft being driven by a cog-wheel on the perpendicular shaft round which the horses travel.

A passage four feet wide extends between the bays and the stables, which occupy the two wings. This extends up to the top of the bays, down which the hay is thrown for feeding, which renders this work as easy and convenient as possible.

A one-sided roof is given to the sheds (instead of a double-sided), to throw all the water on the outside, in order to keep the interior of the yards dry. Eave-troughs take the water from the roofs to cisterns. The cisterns, if connected by an underground pipe, may be all drawn from by a single pump if necessary.

The floor of the main barn is three feet higher than that of the stables. This will allow a cellar under it, if desired—or a deeper extension of the bays—and it allows storage lofts over the cattle, with sufficient slope of roof. A short flight of steps at the ends of each passage, admits easy access from the level of the barn floor.

The sheds, which extend on the three sides of the barn, and touch it at the rear end, are on a level with the stables. An inclined plane, from the main floor through the middle of the back shed, forms a rear egress for wagons and carts, descending three feet from the floor. The two rooms, one on each side of this rear passage, 16 by 34 feet, may be used for housing sick animals, cows about to calve, or any other purpose required. The stables at the front ends of the sheds are convenient for teams of horses or oxen, or they may be fitted for wagon houses, tool houses, or other purposes. The rooms, 16 feet square, at the inner corners of the sheds, may be used for weak ewes, lambs, or for a bull stable.

Racks or mangers may be fitted up in the open sheds for feeding sheep or young cattle, and yards may be built adjoining, on the rear, six or eight in number, into which they may run and be kept separate. Barred partitions may separate the different flocks. Bars may also enclose the opening in front, or they may, if required, be boarded up tight. Step ladders are placed at convenient intervals, for ascending the shed lofts.

A granary over the machine room is entered by a flight of stairs. Poles extending from bay to bay, over the floor, will admit the storage of much additional hay or grain.

We are sure our readers will agree with us, that the FARMER'S ADVOCATE going into a family, will not only exert a healthful influence in stimulating thought and improvement, and thus elevate the mind of all cultivators of the soil, and of others too; but that it will also help to guard against errors, against imposition, and assist all to make their labor more profitable. With this view, we invite all to lend a kind influence in making the ADVOCATE even more widely known, and in drawing to it as readers, many who are now without its visits. This we ask as a friendly favor, aside from the rewards which we offer on a liberal scale to those who solicit subscriptions.

Fattening Swine.

BY JOHN M. STAHL.

Fattening swine is not what it was half a century ago. The hogs themselves were far from their present excellence. It was almost impossible to fatten them before two years of age. They were long, lank and bony. They were driven many miles to market, and they travelled it with ease. Then the only season of packing was the cold season. The present extensive packing in the summer season was undreamed of, and would have been considered impossible. It still remains the case that the largest number of hogs is packed in the winter season. Any discussion of ways and means would be timely at any season, but will now interest the most farmers. The improvement in swine has been adverted to. Careful breeding with a purpose has made swine more early matur-

be boiled in a large iron kettle, suspended near the fattening pen, with very little trouble. There are always potatoes and apples unfit for marketing, and these can be saved for the hogs. Potatoes, composed largely of starch, are valuable as a corrective of the too great oiliness of corn. The slop barrel may be made to serve a valuable purpose. It is one of the very important adjuncts of the fattening pen. It should receive all the dish water and vegetable and meat scraps from the house. All the skimmed milk not needed for other purposes should be put into it. Yet this will not be enough. It must be replenished frequently with water; and to give this body and strength, purchase bran and shorts and keep the barrel one-third full of these. Always stir the barrel just before slopping the hogs, and give them all they will drink of it.

The farmer may further increase the variety of food by giving it in different forms. Thus corn may be ground or cooked. Meal may be made

into a slop, and the potatoes and turnips mixed with it. A little ingenuity on the part of the farmer will enable him to increase the variety of food by varying its form. Like human beings, hogs prefer a cook of different methods.

Another fault is in the lack of green vegetable food. This is absolutely essential to the health of the hog at all seasons and under all circumstances. If the object were only to keep the hog growing, the need of such food would

be greatest in the heated term. But at the time of fattening the need of such food is urgent, no matter what may be the temperature of the atmosphere. Then large quantities of food are eaten and are to be assimilated. The hog is a *hoggish* animal. He is tempted with an abundance of food, and taxes his digestive organs to the utmost. His food is almost entirely dry, hard, indigestible food. Unless relieved the digestive organs become overworked and impaired, the whole vital system suffers, and the animal becomes diseased. Green food, being gently laxative and easily digested, will prevent this. At this season of fattening it should be furnished for the additional reason that during the preceding months the swine have feasted upon green food, their digestive organs have become accustomed to it, and the change from green to dry food, if too sudden and radical, will lead to the most disastrous results. It is somewhat difficult to provide green vegetable food at this season. To a considerable extent its place must be supplied with roots and tubers. The farmer may cook the tops of turnips with the roots. He can sow a patch of rye and it will afford pasture whenever the snow is off. Clover hay may be steamed or slightly cooked, and the hogs will eagerly devour it.

Another grievous error is observable in the water supply. It has become a common notion that a hog does not require decent water, as do other animals, and that any sort of water is good enough for a hog. It is forced to drink from sluggish creeks or stagnant pools water thick with filth, noxious effluvia, and parasitic germs—water which no other animal would deign to touch unless upon pain of starvation. It is said in justification of this practice that the hog is filthy, befouls his water, and really prefers dirty to clean water. If this is so it is certainly a trait developed by education, and

man alone is to blame for it, for it is contrary to the course of nature that any animal should prefer its own destruction. Hogs desire a place to wallow because, paradoxical as it may seem, it is their way of cleansing themselves, and instinct teaches them that cleanliness is essential to healthfulness. The hog encases himself in a coat of mud, and with it scratches off numerous parasites that have escaped a watery grave in the wallowing hole. But if a hog has been accustomed to pure drinking water and is provided with a pool for wallowing, he will rarely so far forget decency as to convert his watering trough into a bath tub. If he proves to be a reprobate, he can be restrained by nailing some slats on his watering trough.

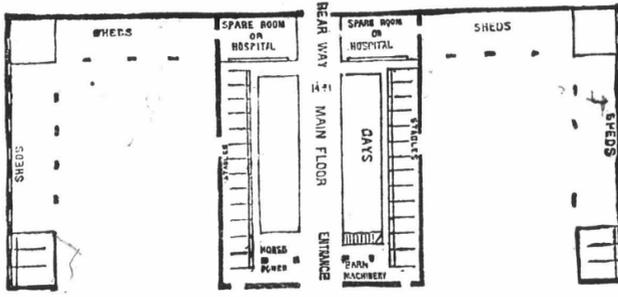
A supply of pure water is important at all seasons, but most important at the season of fattening. At this time the hog eats large quantities



ELEVATION.

ing, eliminated a large proportion of the waste matter, reduced bone and increased flesh. But this has been attained at the expense of vigor. Diseases of swine are always prevalent and their victims are yearly numbered by thousands. It is at this autumn season that diseases prove most destructive. Doubtless much of the mortality among swine is due to an injudicious course of feeding, and the incidentals of fattening. Therefore it shall be the object of this article to briefly recount some points in the fattening of swine which will lead to the best results, both as regards the health and obesity of the hog.

The most common and notable evil in the fattening of swine is the lack of variety of food. This is most apparent in the great corn producing sections of North America; as, for instance, the States lying contiguous to the Ohio and Upper Mississippi rivers, in the United States. But wherever hogs are fed this evil may be said to exist. This arises in great part from the peculiar nature of the hog, which the farmer does not understand, or else is so indolently indifferent to his own interests as not to provide that variety of food which he should



GROUND PLAN.

and may. Of all farm animals the hog is most truly omnivorous. In a wild state it feasted on nearly everything that came in its way. Grasses, herbs, bark, roots, nuts, fruits, bugs, worms, acorns, even snakes were found on its bill of fare. It is yet a hog, and yet requires the same variety of food. It does not get it, though the farmer would consult his own interests by providing it. This he can easily do. He can provide grasses at little expense (they are a very cheap food for hogs), and with little trouble. He can raise pumpkins and squashes among his corn, and while these are not great flesh or fat formers, they are valuable medicine at fattening time, being gently laxative. He can sow turnips on the land that has been occupied by early potatoes, and these, when boiled, are excellent food for hogs. As good a lot as I ever saw was fattened exclusively on boiled turnips. They can

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of food and requires large quantities of water to allay his thirst. If his drinking water can work him an evil, it will now work the greater evil. At this period, also, the conditions most favor disease; all sources and agents should be guarded against.

It will not do to depend upon creeks for the water supply in many localities. Where they are fed by spring and are ever flowing, their waters are pure, cool and sweet. But in many localities they are formed by surface water alone. After rains they rush along, but their waters are thick with unwholesome sediment of decomposing vegetable and animal matters gathered from the surface of the land; they soon recede into stagnant pools still more unfit to be drunk. As a rule, ponds are a nuisance, and the water they afford is rarely wholesome. Wells fed by underground streams, and protected from the surface washings by banks of clay around the curbs, are the only reliable sources of the water supply. The farmer may find it laborious to pump water from a well, but he will make money by doing so.

Fattening hogs should be supplied with what I shall call *condiments*—seasonings to sharpen their appetites by imparting tone to the digestive organs. First of these I would put charcoal, which will absorb the gases engendered in the stomach. If the fires at the house do not afford a sufficient supply, burn a heap of rubbish and drown out the coals. If ashes are mixed with it, all the better, as they will prove destructive to hurtful intestinal worms. Salt should be regularly supplied. Hogs will eat too much of this if allowed to do so, especially if hungry for it, and it should be given to them often and in small quantities. Under this head pumpkins, squashes, apples, &c., might be classed.

Last, but not least, are shelters. All farm animals should be properly sheltered in inclement weather. Sheltered animals will put on more flesh on a less allowance of food than animals not sheltered. I am of opinion that of all our common domestic animals, it is most difficult to shelter hogs properly; yet their shelters receive the least attention. This is a subject of so much importance, and one so generally neglected, that I shall reserve it for a separate article.

In justification of the length at which I have treated this subject, I refer to the figures showing the importance of this industry in the territory where the FARMER'S ADVOCATE circulates.

Impotency Among Males.

What stock raiser has not suffered annoyance and loss from the impotency of some male? The impotency of males has assumed such proportions that it may be called one of the evils of stock raising. Such has become its frequency that a breeder is doubtful of a male's ability to get till service has demonstrated it. It is a growing evil, and one of comparatively modern origin. Fifty years ago an impotent male was a rare exception. Impotency was almost unknown among the unimproved breeds of that period, and to-day is of rare occurrence among scrub stock. This fact will afford us a clue to its origin and causes. If it has originated with the improvement of the animals, increased as that improvement has augmented, and is now almost unknown among unimproved breeds, we may safely surmise that the improvement of breeds is in some way responsible for it.

This is an evil of no mean magnitude. Males have a value; and among the highly improved breeds, where this evil is most prevalent, that value is a respectable one. They also require no little care and attention. They must be well fed, well watered, and well sheltered. To keep a male is expensive. Above all this, they are exceedingly troublesome to the stock raiser. Breeders will tell you that one male will make more trouble than twenty females. They are unruly, and difficult to manage and control. They must be confined, or at least separated from the females, except at the season of service. If the breeder has gone to the expense to procure and maintain, and has incurred all the trouble to keep a male that proves impotent, his loss is far from being small.

But this will prove to be the smallest part of his loss. There is a proper period for the birth of farm animals. This varies with the class and often with the purposes of the breeder. It may be said that if, for any reason, the time of birth is deferred to an improper season, the best results will be thereby lost, and the breeder will suffer damage. This is the inevitable and invariable result of the impotency of a male. The female may be served, but the worthlessness of the service can not be detected until it is too late. The evil is all the greater because it can not be known in season to

remedy it. Perhaps the breeder wishes early spring litters; but an account of the impotency of the boar the pigs are not born till June or July, if the breeder is so fortunate to secure the services of another boar in time to secure litters at all. Calves that should have been dropped in April are, on account of the impotency of the bull, not dropped till midsummer. Lambs are born two months after the proper season, because the ram has proved worthless. Such occurrences are frequent, and always annoying and accompanied with loss. The importance of discovering the causes that produce impotency, that it may be avoided, is obvious.

Undoubtedly failure to get is often the fault of the females. Some cows are naturally barren, and, under the most favorable circumstances, would fail to get with calf. Again, this barrenness seems to be confined to particular seasons. In several years nearly every cow in my neighborhood has failed to get with calf. I do not deny that there are barren cows; but in this article I propose to confine myself to impotent males. When the fault is in the male it can easily be discovered; but the remedy for, as well as the causes of the impotency, are not so easily discovered.

The ability to beget depends not only upon the perfect development and healthy action of the sexual organs, but upon the general health of the whole system. The threads of the bodily fabric are so closely interwoven, so sympathetic are their action, that one organ can not be affected without communicating its affection to other organs and influencing their action. For example, disease of the stomach will be communicated to the liver; in turn affect the kidneys, and produce disease in the urinary organs, and from there be transferred to and impair the vitality of the sexual organs; at last the disease of the stomach has resulted in impotency. Again, poverty of the blood may cause impotency, as the life-begetting fluid is derived from the blood. Disease of the body does not always lead to impotency, but it may; and to insure the successful action of the sexual organs the health of the whole body must be maintained.

In a perfect animal, each organ is fully and perfectly developed, and the development of the whole animal is symmetrical. The development of one organ is not at the expense of the other. It is apparent that this symmetrical development is most surely attained by good muscular growth, and most often lost by excessive fatness. Males for breeding are most often pampered, and each breeder knows that pampered animals are the most often impotent. Excessive fatness begets a general bodily lassitude, and tends to a partial suppression of sexual desire. If the sexual organs are not called into activity by the will, they must lie dormant and grow weak and feeble. All this time there is an undue deposit of fat occasioning still greater lassitude. The exertion of the animal is less, and its muscular development decreases in proportion. Thus all the conditions of impotency are gradually but surely developed—obesity, aversion to exertion, lack of muscular development, non-activity of sexual organs, and general debility of the whole animal economy.

With these facts under consideration, we may understand why the proportion of impotent males is greater among improved breeds than among scrubs. Those who avail themselves of the service of scrub males are rarely provoked by their impotency. The fault is almost wholly confined to our improved breeds. This is not because they are improved breeds, nor because the animals are of fine form and superior pedigree, but because some conditions in their lives, not existing in the lives of scrubs, tend to the production of impotency. A scrub animal is not pampered. It takes plenty of exercise, for it has the disposition to do so. It may be kept in good growing condition, but obesity is not forced at the expense of muscular development. Though its development may not be exactly symmetrical, there is very little danger of the non-development of the sexual organs, for the animal propensities, from the very conditions of its life, preponderate.—[National Live Stock Journal.

Let your horses stand loose, if possible, without being tied up to the manger. Pain and weariness from a continued position, induces bad habits and causes swollen feet and disorders.

A deal has been written about sheep loving bitter weeds, briars, sassafras, and the like, and they are good scavengers for a foul farm. But it has been found that sheep love the cultivated grasses best.

The Farm.

Evergreens on the Farm.

Nothing adds more to the attractive appearance of a farm home than a liberal supply of evergreens tastefully arranged upon the lawn and about the buildings. But their value is by no means confined to the aesthetic effect they produce. Judiciously employed they serve a purpose of practical utility as wind-breaks for the protection of the house, the garden and even the barn and cattle yards, for which purpose they are unexcelled by any other material that can be used, serving the double purpose of ornament and use. A few years since a horticultural writer gave his experience of the relative value as wind-breaks of a high, tight board fence and a row of evergreens of about the same height. He found in case of a cold north-west storm, after tender vegetables were up in his garden, that for a few feet from the board fence it served as a perfect protection, while beyond this the wind passing over the fence swooped down with destructive force, destroying whatever tender vegetation came in its way; while in case of the evergreen screen, while the wind was not wholly arrested by it, its force was so broken that nothing in its range suffered. Much greater care is necessary in handling them than is requisite in handling deciduous trees. The exposure of the roots to a hot sun or drying wind, even for half an hour, is almost certain death to the tree. But this need not prevent their being used liberally upon the farm, at small cost and even less risk. The better plan, if one has patience to wait, is to buy the small stock of nurseriesmen, when about one foot high, buying by the thousand. Plant in rows four feet apart, and two feet in the row, and cultivate till large enough to set. An assorted thousand, embracing the Scotch and Austrian pine, Norway spruce and American or European arbor vitae—all hardy—can be bought at a cost not exceeding \$10. In three or four years from planting there will be some large enough to take up and set, leaving the others to grow, and from this time on there will be an abundant supply to draw from each year, till they have worked a complete transformation in the appearance of the premises. When so grown, a cloudy or wet day can be selected for transplanting with little or no risk of loss, since the trees as soon as taken up can be at once transferred to the holes already dug, and with much of the dirt in which they grew still upon the roots.

Small evergreens pulled up in the northern woods are freely advertised each spring as low as two or three dollars per 1,000, but they are dear at any price. In gathering them and preparing for shipment, there is such exposure of the roots that they are usually dead before reaching the purchaser, and of no value whatever, while nursery-grown stock of the size named, if properly handled, will all grow. In planting evergreens upon the lawn as an ornament, above all things avoid any appearance of stiffness in the arrangement, like straw rows. If thrown in irregular groups as if growing thus naturally, the effect will be altogether more agreeable. A fine effect can be produced by planting the Scotch or Austrian pine in a circle about fifteen feet across and the trees six feet apart with one in the centre. When they have grown so that the branches interlock, trim off the inside branches of the circle, and trim up the centre tree sufficiently so one can stand under the branches. This will give a solid mass of pine, when viewed from the outside, but inside, a room 15 feet across, walled in and roofed with the fragrant pine. Trim for a door on the north side, and you have a *pine parlor* such as the writer has on his place, and which is extensively patronized by the family and visitors on warm summer afternoons. Where wind breaks are wanted pines may be planted in double rows, six or eight feet apart, the tree in one being opposite the space in the other, and allowed to take their own way. The branches will soon interlock. Or, the Norway spruce or arbor vitae can be planted in a close hedge, and by keeping the outside branches clipped in, will make a solid wall of verdure which can be run up to a considerable height. The farmer who will invest \$10 in evergreen nursery stock, and take care of it, will have all that he wants to plant on his own premises, and a good deal to give or sell to his neighbors. He and his family will not only get a great deal of enjoyment from the increased beauty of his surroundings, but if he plants as liberally as he should, he will in ten years add \$1,000 to the selling value of his property.—[Farmer's Review.

A Prairie Home.

HOW TO BEGIN IT, ADD TO IT, AND FINISH IT.

The settler's first and indispensable want is a house—something to protect his wife and little ones from the sun and rain; not a costly villa, or

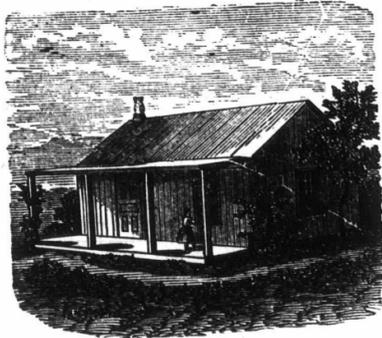


FIG. 1—ELEVATION.

even a commodious farm house (which he may have in prospect for the future as the reward of industry and perseverance), but simply a house to live in.

The pioneer in the backwoods has a decided advantage; for, with the help of his ever-willing neighbors, or, mayhap, only his own sturdy sons, he has but to fell the monarchs of the forest and roll them up, and, with a roof of elm or hemlock bark, he has a house at once warm and comfortable.

But, in the sparsely timbered regions of the Northwest, as a general thing, the luxury of a log house is not to be thought of. The first settler is quite too often, for the good health of himself and family, forced to take refuge in a "dug-out," which is made by simply digging a square excavation in the south slope of a bank or hill, six or seven feet deep in the rear, and building up the front, levelling up the sides with sods plowed from the prairie. It is roofed first with poles, then small brush and hay, and lastly, ten or twelve inches of dirt, packed down hard. This makes a habitation—it cannot be called a house—usually warm, but more or less damp and unhealthy.

In the accompanying engravings is shown a plan which is practicable for prairie-settlers of slender means.

Figure 1 represents a simple cottage of only one room, which can be erected at a trifling expense, even where lumber is high and scarce. It is 12 by 14 feet, and 7 feet between joists. It will take

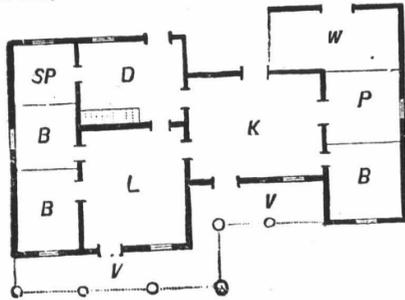


FIG. 3—PLAN.

material as follows:—800 feet of inch boards, 4 sills 6 by 6, and 4 beams 6 by 6, 10 rafters and 12 joists, 2 panel doors and 3 windows, nails and paper for roofing. Total cost about \$50.

Any man of ordinary ingenuity can do all the work himself, with the aid of a carpenter to case the windows and case and hang the doors. First

frame the sills and lay them upon the foundation in proper position; next frame the beams, and lay them upon the sills; then securely nail two boards perpendicularly at each corner of the sills. Use sixteen feet boards, cut in the middle; this will make the building seven feet in the clear; now cut four stanchions seven feet long, and, with the aid of one person, raise the beams one end at a time; slip under the stanchions, and nail the top of the boards, that had been previously fastened to the sills, securely to the beams, then proceed with the planking, which any one can do who can saw off a board and drive a nail.

For roofing, use saturated tar paper, which is manufactured expressly for it, and is for sale in all western towns. The cost is about one-fourth that of shingles; it is not as good, but will last several years, when shingles can be laid right over it.

If it is spring or early summer, the clapboards can be omitted until the fall; but do not omit the veranda—the crowning glory of any house, large or small, is a veranda.

At the end of one or two years it is presumed that the settler wishes to enlarge his humble domicile. This he can do, as shown in plan Fig. 2, which consists of his first erection with a lean-to of one bedroom, a pantry, and a wood-shed. This can be erected upon the same principle as the first. The reason planking and clapboards are recommended in preference to studs and clapboarding is, that any one can build with planks; but it requires a professional carpenter to build a studded house. Figure 2 will make a convenient house for a small family. The inside can be finished with paper or plaster, to suit the taste of the occupant. Again, in the lapse of years the farmer wishes to



FIG. 3—ELEVATION.

enlarge his house. If he has followed the preceding plans, he will now "improve," as shown in Fig. 3. This consists of an upright part, added to his former erections. He now has means sufficient at his command, and will call in the aid of the practical architect. He can build his last part two stories high if he wishes, but a low house is advisable in a prairie country. This makes a very convenient house, and it is not devoid of beauty.

Plan, Fig. 1, is a room 12 by 14; V, veranda. Plan, Fig. 2, K, living room, 12 by 14; B, bedroom, 8 by 9; P, pantry, 8 by 8; W S, wood-shed; V, veranda.

Plan, Fig. 3, L, living-room, 12 by 13; K, kitchen, 12 by 14; D, dining-room, 9½ by 12; B, B, B, bed-rooms, 9 by 8 and 8 by 8; S P, summer pantry, 8 by 8; P, pantry, 8 by 8; W, wood-shed; V, V, veranda. The summer pantry can be used in winter for a place to keep meat, and as a store-room. Being away from the kitchen fire, it will keep fresh meat a long time, in suitable weather. The cost of the last design (the third addition) will not exceed \$1,500.

I can say without flattery that your paper is the par excellence of agricultural journals, and although we take several papers we always find it the most welcome of any on the table. In my rambles about the country, wherever I see thrift, taste or industry, the ADVOCATE is, as a general rule, sure to be found. May each year add to its numbers, usefulness and excellence. R. V. K., Lansdown, Ont.

Commercial Fertilizers.

The question is asked, answered and discussed in the agricultural papers whether "chemical fertilizers pay;" whether they are of any use, etc? When in this country and in Europe good crops have been raised from five to forty years without any other fertilizers, the questions seem odd enough. No farmer should condemn commercial fertilizers because superphosphate of lime alone has been used

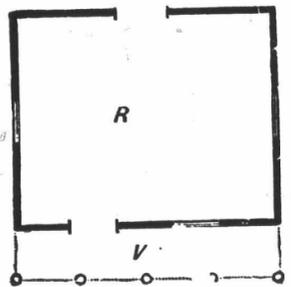


FIG. 1—PLAN.

without any visible effects. If the land needs all kinds of plant food, crops will receive but little benefit from one kind alone. It may happen, moreover, that the particular special fertilizer applied is just that which the land does not need. Farmers are apt to look upon "phosphates" as complete chemical fertilizers and to conclude that all concentrated fertilizers are worthless because from a single trial the "phosphates" failed. This is one-

sid reasoning. There are fields upon which wood ashes will produce no visible effects; others upon which phosphoric acid or nitrogen may be wasted. But if all three are applied and the land needs food, the growth of the crops will as surely be promoted as by the use of farm manure, for the reason that they supply precisely the same food ingredients. If we could have all the farm manure needed, there would be no sale for chemical fertilizers at their present prices. But when we cannot procure farm manures at a reasonable price we must resort to the next best thing—complete chemical fertilizers, unless we ascertain by experiment that our land needs one or the other constituents of which they are made. Then perhaps, bone, potash, or nitrogen may produce the same effects as all combined.—Rural New Yorker.

The depredations of insects on crops are compelling farmers to learn a good deal of entomology. It is much less common than it was a few years ago to kill a bug or worm merely because it looked ugly. Some of our best insect friends are neither pretty

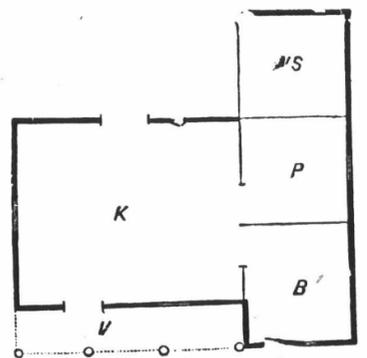


FIG. 2—PLAN.

in looks nor in disposition. It is in the fall that their predatory character benefits us, for their energies are then devoted to destroying, our worst enemies.

The Flower Garden.

A Simple Conservatory.

A porch facing the south, having pillars, can readily be converted into a conservatory by simply having sashes or window frames made to fit between the pillars or posts, and fastened with screws or hooks. They can be taken down in the summer and stored away to allow the place to be used as a porch again. By this method a neat little conservatory can be made. To heat it a small, tight coal stove may be used, or have a pipe run from the heater, if there is one. In using a stove care should be taken not to allow any more gas to escape than can be helped. Check the fire during the day if it is too warm, but do not open the stove door to allow gas to escape. A pan or kettle kept constantly filled with water should be always on the stove to supply the necessary moisture. Balconies can also be converted into small conservatories by simply enclosing them with sashes. There are many places which, by a small outlay, could be converted into a conservatory. It is of the greatest importance that the upper portion of the window or sashes can be arranged to open without difficulty to admit fresh air. Also so arrange things that you need not knock over half a dozen plants before you can reach the windows. Top airing is the best, as the cold air on a winter's day will not strike the plants suddenly. It would be well to have cheap cotton shades made to cover the outside of the window on cold nights.

Lifting Plants for Winter Flowering.
BY M. MILTON.

Plants which have been grown for winter flowering should be lifted before cold weather sets in. Carnations are often almost completely destroyed for flowering during winter by leaving them out until they have been exposed to severe frosts. To insure free flowering for the largest possible period, they should be placed in winter quarters upon the approach of the first frost. Stevias, Eupatoriums, and all tender plants, should be lifted and potted in good time, but kept cool and exposed out-of-doors as long as possible; for, although they will not endure frost, they succeed best when kept as cool as possible, and plenty of air is given them at all times. If kept in a close atmosphere, they "draw up" with weak shoots and still weaker flowers. Plenty of light and air on all suitable occasions are the principal conditions to insure success with this class of plants.

Lifting plants should be done, if possible, on cloudy days. Some people prefer to lift plants on wet days; this is proper enough when the plants are growing on sandy soil, but if growing on soil having a good proportion of clay in it, it is not advisable. The soil around the roots is liable to get hard and remain so, in consequence of which the roots have considerable difficulty in making a start in the hardened mass. Plants growing in stiff soils should be lifted when the ground is damp, but not wet. With sandy soil it is different; from such, plants may be lifted at any time. If dry, the soil will fall from the roots and leave them uninjured; and if wet, it will cling to them, but does not harden as in clayey soils.

Roses for flowering during winter should be lifted early in the season, so that fresh roots can be made before they are placed in high temperature. Every grower of Roses knows it is useless to expect success with them without plenty of good, healthy roots.

Large plants of Heliotrope can be lifted and placed on benches without suffering much from the change, if care is taken to mutilate the roots as little as possible, to keep them from exposure to drying winds, to cut back the leading shoots in proportion to the mutilation of the roots, and to keep the atmosphere of the house moist until fresh roots and new shoots are started. If placed in a part of the house where plenty of sunlight can be given them, they do not need as high a temperature as most people suppose necessary to insure an abundance of flowers during the winter months.

All plants intended for pot culture during winter, and requiring pots over six inches in diameter, should be well drained with broken pots, charcoal, or any material suitable for allowing the moisture to pass off freely. Unless the water passes freely through the soil the plants do not thrive well.

Storing Geraniums.

Vick says:—Geraniums that are to be merely kept over for another season may be allowed to remain out as long as the weather will permit, and sometimes this is quite late. Last fall, our plants remained uninjured until the first of November, or a little later, but that was quite unusual. By watching the temperature, and giving the plants protection when cold threatens, they may be allowed to remain some time after frost has arrived. However, when a severe freeze is imminent the plants should be lifted and taken in. Strong plants that have made considerable root-growth may be kept over very well by tying them three or four in a bundle and hanging them up in a cellar, where they will be secure from frost through the winter, and where there is sufficient moisture in the atmosphere to prevent drying out. A cellar containing a furnace, keeping the air constantly dry, is not suitable, and even one with a cement bottom is less desirable than one with soil or gravel bottom. Small plants, and all those varieties that have a small root-growth, such as all those with variegated foliage, do not keep well by this method, as they dry out. Except for those that are very strong we advise placing the plants in boxes of soil in the cellar, and allowing only sufficient moisture to prevent drying out. In either case it is not necessary to prune or reduce the size of the plants, but to put them away with the foliage on, which in time will turn yellow and wither, and then may be removed, otherwise the leaves will decay and cause the stems also to rot. A little attention in this respect will insure their soundness. The plants, in early spring, can be brought out and potted, and watered quite gradually at first. By planting out time they can be in fine condition.

Poultry.

Poultry at the Industrial.

The exhibition was one of the best that has yet taken place in Canada, each class being well represented, and the birds shown were, with few exceptions, of superior quality; in fact, so good were the birds that it made the judging no light task. We heard of very little grumbling at the awards, the majority of the unsuccessful exhibitors being satisfied that the prizes had been given to the best birds. The display of pigeons was large and exceedingly good, nearly all the well known varieties being represented. It is a pity that more space cannot be given for the exhibition of these pretty birds, as they were nearly always surrounded by admirers.

Now for a little grumbling on our part. It is too bad that the show of poultry cannot be open to the public before the middle of the week. There is no reasonable cause why the birds cannot be on the grounds on Monday, and the building opened to the public on Tuesday morning, the last named being one of the best attended days of the fair, and visitors during the first part of the week were deprived of the pleasure of viewing this department. The judging could be going on in one portion of the building, and the public allowed into the remainder, instead of being excluded altogether. By the present system the birds were only on view two days and a half.

The poultry exhibit at the Toronto Industrial has grown to such dimensions that it is time that the directors considered the question of enlarging the present building, or better still, of erecting a new and more commodious one, as the old premises are entirely too small for the purpose. Many of the finest birds, especially among the males, were cramped up in coops in which they were unable to display their excellent qualities, and in some cases injured their plumage. Again, some of the birds had to be placed so near to the ground that it was impossible to get a good look at them without having to stoop very low; the consequence was they were passed by. What is wanted is a large, airy building, with all the coops about two feet from the floor, and large enough to enable the birds to turn around without injuring their feathers, with avenues wide enough to allow visitors to pass easily without having to push their way through when a crowd was opposite any pen.

The Apiary.

How I Winter my Bees.

BY WILL ELLIS.

I will give my mode of wintering for what it is worth. The winter of 1881-82 I wintered 6, none dead; 1882-83 wintered 20, none dead, and will now pack 40 as per directions given below. As I use the Root Simplicity Hive, Langstroth Frame, I will give dimensions for it, and should your hives differ in size, you can make them to suit. The hive is 16 inches wide by 20½ long, 12 inches high outside measure. Now for the bottom board of shell: it should be 26 inches wide by 30 long, and can be made of any common lumber, as the bottom board of hive is a cover and as the cover is taken off in winter. It leaves the hive yet 12 inches high. The entrance is always with this hive in the bottom board. Now set on your hive and bottom board, and in the centre of the bottom board just made the alighting board must (or should) protrude one inch over the bottom board of shell. Now for the shell: you can either make it out of ½ inch or inch, just as you choose. Make it to set on the board, but before doing so cut an opening in the front of shell the width and depth of bottom board of hive. Now set on shell, and you will see that the inch protruding answers for an alighting board in winter. Now lay on a strip of wood the width of the distance from shell to hive, over the entrance, and this gives the bees an opportunity to come out or go in as they choose. The shell should be 20 inches high in front, by 17 at the back; this gives 3-inch slope for the rain and melting snow to run off. Now take off the cloth of the frames of the hive, and near each end lay a strip of wood 1 inch square across the frames, and on these lay strips of wood like lath lengthwise; this gives the bees free access to all the combs and saves cutting passageways through the combs. Now lay on your cloth so that no chaff can fall through into the bees. Then fill in with good dry oat or wheat chaff; you will have 4 inches of chaff all around and 6½ over. If you choose, after putting on 3 inches of chaff, you can put on the hive cover and fill in over this; then put on your shell cover. I will give no directions for making it, only be sure to make it so that water cannot get into the chaff. If your shell cover projects over all around, you can make the shell out of any old or cheap common lumber the alighting board is put on to the bottom board by means of two screws. I have found this the cheapest, easiest and safest, and as long as I can winter safely I shall not change. I shall commence to pack when chilly or cool weather begins, and have them all packed away before winter sets in.

How to Deal with the Clover Worm.

So soon as the second crop of clover is cut off, the field should be immediately plowed. There will undoubtedly be some and perhaps many worms at the root, and turning them under will entirely destroy them. At this time the clover roots have made all the growth of which they are capable, and if left till spring the plants will be only a mass of dead stubble with millions of the clover insects harbored in them, ready to commence work another year. If the field is intended for planting next season there is no loss in fall plowing, and a decided gain if rye is sown to be turned under the following spring. If wheat is to be sown after the clover, it is better not to cut the second crop, unless examination shows the heads well filled with seed, in which case the crop is too valuable to be used for manure.

I have been taking the ADVOCATE for many years, and consider it an excellent agricultural journal; well, ably and judiciously conducted, and in every respect abreast of the age; fearless and independent in exposing what you consider wrong, and giving due credit where it is deserved.
J. W., Springbank, Ont.

Mr. Charles Downing says that dusting with sulphur as soon as the leaves are large as a half-dollar, and renewal after each rain, will generally prevent mildew on grape-vines, but not always.

Fruit Garden.

Russian Plums.

Of late years plum culture has been neglected. New, hardy varieties, grown in northern latitudes, have not been introduced into this country. In Russia plums are successfully cultivated, notwithstanding the severity of the climate; but they are dwarf, and Mr. Chas. Gibb, of Abbottsford, Que., speaks as follows of these plums:

"These northern forms of the plum are dwarf in habit of tree, often bushes, and this seems to be a provision of Nature; for, in these cold climates, if a plum bush is killed to the ground new shoots soon grow and bear. Of these plums there is a great variety; some are red, others yellow, but mostly blue; they differ widely in flavor, some, I would say, equal to Lombard, some are early, some late; they are usually without any astringency of skin, and usually free stone. I was not prepared to find such plums in the cold climates of Russia. The improved varieties of the wild plum of the North-Western States, I had expected to be the future plums of the Province of Quebec. I have some of them, heavy and reliable bearers, but of medium quality only. There are much better varieties than those I have—for instance, the Desota and others, yet these non-astringent, fleshy, free stone Russians, have a combination of good qualities which entitle them to extensive trial in our cold country.

These Russian plums are grown, no doubt, sometimes from stones, but usually from suckers. Most of the horticultural gardens or nurserymen have made small collections of the best they have found. By thus obtaining roots of the best, from a number of points, we may, more or less, get the best of these Russian seedlings.

At Tula, we find quite a variety in the peasant orchards, and among the Reine Claude. Yes, in Russia we find a family of Reine Claudes, red, white and blue. They are of very fine quality, extra quality, but in the cold climate of Tula they are planted at an angle of 45 degrees or less, and bent down to the ground before the snow falls. Thus protected by a covering of snow they often bear bountifully. When too old to bend down they are allowed to take their chances, often bear a crop or two and then die."

In reference to the above we may say that Mooser's Arctic plum, which was mentioned in the columns of the *ADVOCATE*, on page 228, in October, 1880, is a characteristic of the Russian variety. It is said that they stand a winter cold of 50° below zero without an injury. We have watched this variety, and though not as yet grown in this Province, from all our correspondents in the Maritime Provinces, we hear that it has done well. The Hon J. F. Stairs, of Dartmouth, N. S., has a number which he planted in 1882, and they have all done well. From information we have received, the fruit is large, of a handsome, dark color, fine quality, and will keep from August to Christmas. It has never been known to have "black knot," or any other disease.

Advice to Young Orchardists.

BY JOHN J. THOMAS.

To guard those about to commence fruit culture against errors to which they are liable, a volume might be written; but there are a few points which may be more particularly and briefly alluded to. First of all, novices should begin moderately, with a view more to learning the trade than to making money on the start. They should do everything thoroughly and in the best manner. Prepare well the intended ground for planting with deep and clean culture, and see that there is a good natural or artificial drainage. Select proved standard varieties, not costly novelties. Choose vigorous, young trees of moderate size, and look more to good and copious roots than to showy tops. Constant and clean cultivation will bring young trees forward in a satisfactory and healthy condition. It is better to add yearly to a collection, as experience points out, than to attempt to do all the planting at once and be compelled to change afterwards a large portion of the varieties. These remarks are intended both for market orchards and for plantings for home use.

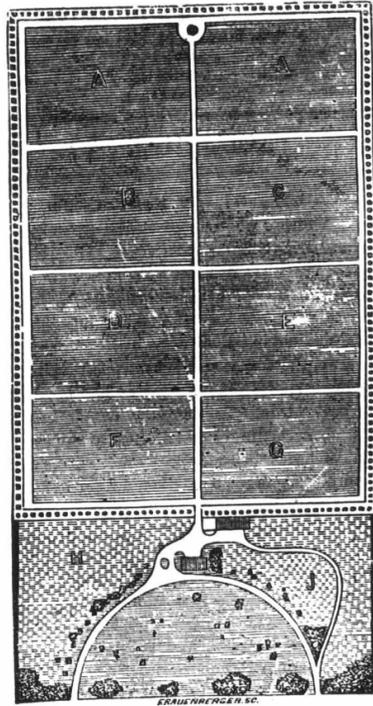
The young market orchardist would do well to pursue a course somewhat like that adopted by Napoleon in Egypt, when he and his officers were riding on a dark night on the broad sea beach when the tide was down. All at once the water began

to rise and to pour in upon them, but they could not see which way to make their escape from drowning. Napoleon, never at a loss, ordered them instantly to form into a hollow circle, with the horses' heads outward. Then all were directed to ride ahead; if the water became shallower to keep straight on; if deeper, to turn about and follow the rest. This course quickly brought them to dry land. In like manner, young fruit growers, keeping their eyes open, should observe what course is bringing them to profits, and what towards losses, and lead on in one direction and turn about from the other. In other words, they should follow the prescription of Quarles for acquiring riches, to "out short your losses and let your profits run on." The orchardist can do this only by yearly experiment and observation, and not by attempting to do a great deal at once.

Plan for Garden and Fruit Grounds.

This plan was arranged for a gentleman who had about forty acres of land that he wished to use almost entirely for orchard and nursery purposes.

It is divided into eight plots, containing about four acres each, and the front plot, in which is the house, barn, lawn, &c., contains about eight acres. Through the centre is a road connected with each square, and a road is made around each. Opportunity for turning may be had at the crossings of the roads, but a still better chance is given at the



back of the lot. A border of standard fruit trees is planted around the whole farm, both for fruit and shelter. These plots, of course, might be divided to suit convenience, or crops A, A, apple orchards; B, standard pears, cherries and plums; C, peaches and apricots; D, vineyard; E, raspberries, gooseberries and currants; F, strawberries; G, vegetables; H, dwarf pears and quinces; I, nursery stock.

[Another plan for garden and fruit ground will appear in November number.]

"A Moment with You."

THE FARMER'S ADVOCATE has occasion to feel more than satisfied with its present circulation. That is as true as it can be. But suppose we aim to increase its circulation during the next subscription season—let us say 25 per cent. to be within reason. Will you help us, subscribers? Well, that is what we are going to do, and if we succeed, our friends shall be benefited as well as ourselves—and this is no idle promise. The *ADVOCATE* has never failed to keep its promises to its patrons and we hope that the charge can never justly be made against us. Remember, readers—an increase of 25 per cent. Now let us see!

Seasonable Hints.

White Grubs are among the most dreaded and destructive pests in the strawberry bed, as we are almost powerless to prevent their infestations. Yet, accepting the position as we find it, we can do considerable to stop them in their devastating career, similar to the principle according to which burning houses are pulled down to prevent the spread of the fire to the adjoining ones.

A grub-infested strawberry bed should be gone over every day, and wherever a wilted plant is discovered, it should be dug up at once, and search made for the marauder. He will usually be at work at the main root, where he may easily be found and crushed. But when a plant is already badly wilted, which is a sign that it has been attacked some time ago, the grub—who prefers a fresh, juicy root to a dry and dead one—has generally already gone for another victim, usually the next plant in the row. Careful search has then to be made for another wilted plant, and if there is one near by which shows the least sign even of wilting, do not delude yourself with the idle hope that it may revive again, but pull it out at once, and the grub will be found every time. The treatment is radical, to be sure—in every sense of the word—but it is far better to pull out one-half of the grub take all.

We have heard the remark made: "What is the use of killing a few, others will come to take their places?" This is erroneous; others will not, cannot come to take their places, at least not before another year and before another crop of June beetles appears to deposit its eggs in the ground again. The grubs themselves cannot fly, nor do they wander very far, so that every one killed lessens the amount of damage done.—[American Garden.

Orchard Work for Autumn.

As farmers we are too much given to slighting the orchard. We are slow about establishing one, and are often negligent about keeping it up after once being started. This negligence is especially noticeable during the late summer and through the fall months. The orchard usually receives some little care in the spring, to start it on, but after that, as the pressure of the summer's work comes on, it is almost entirely neglected, except perhaps the gathering of what little fruit may be produced.

Fruit of any kind will soon degenerate unless well cared for. This care does not involve any great amount of labor, but needs that little time and attention regularly. If the roots are allowed to become sod-bound or the tops thick and bushy, the fruit will certainly become small and poor. Thorough mulching during the summer season will remedy the first, and constant and moderate use of the knife will do the work for the tops. I am willing to confess that mulching is my hobby in the management of the orchard. It conforms with nature's plan, and if we would aid nature in her work, we must also adopt her ways and methods. In its natural state, in the forest the tree is mulched by the falling leaves each year adding another layer to the rich mold above the roots. I do not believe in constant cultivation, because the surface feeding roots are then disturbed and forced down, for self-protection, into the cold soil below. Mulching furnishes the fertilizing material needed, keeps the soil moist and mellow, and prevents weeds and grass from growing about the roots. For winter mulching, coarse materials should be avoided, as it will harbor vermin. Muck or even earth, heaped around the trunks a foot or so in height, will be found one of the best mulches for winter.

With the best of care, however, we must lose once in a while a tree, but we need not and should not allow these vacancies to long remain unfilled. Now is the time for providing a supply of trees to fill such vacant places. It is not best to wait until spring before getting these on hand. We should have them "heeled in" this fall, so that they may be transplanted at the first favorable opportunity in the spring. When "heeling in," the roots should be placed below the reach of frost, while tops may be allowed to come nearly or quite to the surface of the ground. A record of the orchard should be carefully preserved, so that the planter may learn which varieties are the most hardy and desirable for his particular locality. He will then be prepared to use good judgment in filling such vacancies as may occur.—[W. D. Boynton, in Indiana Farmer.

The Dairy.

Solid and "Limpsy" Cream.

BY JOHN GOULD.

The subject, or rather causes of the different degrees of solidity in cream, is one that has been often considered, but is not wholly understood; in fact, long arguments are submitted to prove this, or that theory, when in truth it is simply a matter of vaporization, and the different conditions of the air explain the whole matter.

If milk is set in air warmer than the milk, the air settling on the milk causes a condensation, and the cream taking up the moisture of the atmosphere, causes it to become largely charged with vapor, and a soft cream results. Often drops of water are seen upon pans of milk, and how it got there puzzled the whole family, from gray-headed grandmother to the infant, Roscoe G. Smith, when it was simply a matter of depositing the moisture of the air upon a cooler surface.

As a rule, softer cream is best for the average butter maker to attempt to make butter of, as it is limpid, is not lumpy or clotty, and hence churning is simply "turning the crank," and watching for the butter to come.

There is this danger, however, in setting milk in air so moist as to facilitate this condensation, unless the air be absolutely pure, and that is this: thin cream is thus assisted in becoming a better absorbent, and any flying impurity, seen or unseen, smellable or unsmellable, is taken up by the milk, and in the end, often brought nearer by the increased exposure, the keeping qualities of the butter are impaired.

There is no positive loss in solid cream if the conditions under which it should be handled are familiar to the maker. In one respect, if open setting is practiced, the cream is superior, for it in parting with its moisture has allowed its volatile impurities to escape, and to the advantage of the butter; exactly the reverse of the soft, moist cream, unless raised as noticed either in pure air or in closed cans.

The artificial cause of tough cream is the scalding process, often practiced to enable all the cream to rise. At best its only purpose is to expel defects of the milk which exist in the form of odors, the process being actually one of raising the warmth of the milk so high above the surrounding air as to cause the air to absorb the vapors arising from the milk and destroying germs of heat; matters that had best be avoided in the start by knowing something of the principles that govern

ripening, assimilating, and being tempered, is conveyed through large tin conveyors to 600-gallon churns (three of them), which stand in churning room three feet below cream room, so that the cream runs direct from vats to churns. Product of butter runs about 2,000 lbs. daily. So far over 100,000 pounds of butter have been shipped, and a business nearly 300 per cent. greater than former seasons is promised.

Butter-Making as told by a Woman.

BY MRS. S. H. E.

When we used to use the common shallow tin pan, once in a while would come a spell of beautiful weather; then we used to pat our butter affectionately and say, "There, that's just good enough for anybody!" But how very few such spells would come.

We have a number of tall tin cans. The men take enough of these to the barn and strain the milk warm from the cow, and keep as closely shut as possible. When through milking, they bring them to the pump; there sets an empty barrel with one end sawed off. Into this they put the can and fill the barrel with cold water as high as the milk in the cans, cover all with a tight-fitting cover as convenient, and leave it until another milking. Then they bring them into the house, and serve the new milking the same way.



THE BUENA VISTA CREAMERY

the production and care of milk. This artificial heat also prolongs the time of cream rising, but has the same objection attached to it that exists in the other form of tough cream, and has yet another objection which does not appear in the air toughened cream—a butter product, tallowy in appearance, shiny in look, and decidedly lacking in that delicate aroma which is the point for which all butter makers should strive.

The usual tough cream will make good butter if it is so thinned out that specks of undissolved cream, shall not appear in the butter, and all the cream is churned. If the maker understands the actual conditions under which he labors, leathery cream is no "boog-a-boo" in the dairy, but on the contrary, is the sign of a cream rich in butter fats and not charged with matters he could wish in—Greenland.

The Buena Vista Creamery.

We publish herewith an illustration of the Buena Vista Creamery, situated in Buena Vista County, Iowa. The following facts concerning the creamery are furnished by Mr. W. B. Cromwell, the courteous superintendent:—

It is said to be the best designed, largest, and best managed creamery in this country. Building, 70 x 70. Receiving room where cream from 20 routes is taken from the wagons and hoisted by crane and emptied in large cans, holding about 125 gallons each, and which are placed on trucks, run into the cream room and there run off from the receiving cans through faucets, and strained through fine brass wire cloths into the cream vats, where the cream stands over night, and after

When I get ready—that is, after the breakfast things are out of the way, and I have aired the house of all smells of cooking—I open the cans and dip the cream into crocks to set away until it is time to ripen for churning. The skim milk is fed to calves or pigs from the same pails.

Now see what an immense saving of drudgery this is for me! Instead of forty or fifty pans to skim and empty, to wash and scald and set in the sun, three or four swill pails setting around with more or less sour milk splashed about, I have only to wash these four or six pails that never had sour milk in them, and I am ready to go at something else.

I know just how odd this must seem to one who has not investigated. I thought it the most absurd thing I ever heard of, but believe me, I am telling you actual facts. I have no axe to grind whatever, only want to help you, to save you work and money, that is all.

Let me tell you how to begin. Go to your tinman and get him to make you as many cans as you want—we like those about 8-inches in diameter and 20 inches high, the best. Have covers made reasonably tight, and a bail so they can be carried easily. These will hold about 18 quarts each, and made of good tin, ought not to cost more than 50 cents each. The object in having them so tall and slim is to bring as much surface of the warm milk to the cold water as possible; the cream being oily, will not become cold as soon as the water in the milk. The result is that the cream, being both warmer and lighter than the water in the milk, the cream will rise much sooner than it would if not set in water. The colder the water the sooner the cream will come up, but ordinary well-water is cold enough to raise it in four hours. In winter we have not found it necessary to change the

water in the barrel more than once or twice a month. In summer you have to change once or twice every milking. But should you have to change it a dozen times, it would be better than the everlasting washing of pans, and much more satisfactory because the cream is always in the best possible condition. You will get full as much, or more, than by the old way, and always perfectly sweet and free from odors.

If you can't fix it so your spring water will run in and out your box or barrel, it will be very little trouble or expense to have an almost perfect arrangement. Give me a few boards to protect such a spring from the sun, and I wouldn't wonder if I could make as high-priced butter as you can in your \$500 milk house by the shallow pan system, and I would not have to work half as hard, either. Of course, we would like to have a nice place to set our cream to keep cold until we are ready to ripen, but that is another subject, and must be deferred until next month.

Packing Butter.

The Secretary of the British Dairy Farmers' Association says he does not know of a better method of packing butter than that adopted by the consignors of Brittany butter. Tons are sent to England weekly in rough pine boxes, holding two dozen pounds each. The butter is made up into two pound rolls, and is wrapped in muslin, with an outside covering of clean white paper. The boxes measure fourteen inches in length, ten and one-half by six and one-half inches deep; and as the lumps of butter are made of uniform length and diameter, twelve of them can be easily, but closely, packed on end in each box. This butter arrives in London beautifully fresh, perfectly clean, unbruised and uninjured in any way. The secretary further suggests that boxes may be made to hold one or two dozen half pound rolls on end in the manner described. It is not necessary to wrap each roll of butter in muslin if it is properly made into rolls of equal size and form. The muslin used is called mull muslin.

Artificial milk is the next threatening competitor of the dairyman. And knowing what is known of the artifices of the chemists, who are substituting for natural products the most curious and wonderful products of their inventive skill, it is not at all unreasonable to look for artificial milk. Already a substitute for milk is made in England for feeding young calves. It is sold under the name of lactina, and is said to be much cheaper and better than the milk of the cow. It has been introduced and used now for some years, and the demand for it has increased so much that a company has been formed with a large capital for its manufacture in Scotland. It is but a transition from feeding calves, to other purposes as an article of food, although it may not serve for the cheese maker. But as excellent cheese has been made from peas and beans, the cheese factoryman's occupation will not be gone although the cows may be.—[Dairy.

There is some misunderstanding in regard to the use of oil cake meal. It is generally supposed this feeding substance is valuable only for the fat contained in it. This view does not seem to be sustained by the facts. As in other manufactures, there are "new processes" in the making of vegetable oils. The residue of the oil is now extracted from linseed cake after the first pressing by means of volatile ethereal solvents, such as benzine, which dissolve every particle of the oil and leave the meal so free from oil that it will not even stain paper under heated pressure. Such meal is considered of little value. But this is a mistake. It is of more value in the dairy than the old process meal, because it contains more protein substances, as albumen, mucilage, etc., all of which not only furnish flesh forming matter, but which also go to form fat. Such meal is of more value in the dairy to mix with starchy food, as corn meal, because it adds the needed protein and it is devoid of the oil, which has always given a bad flavor and texture to the butter.

Slow milking of cows never secures the full product. The cow becomes tired of relaxing the udder muscles, and after a time resumes the more natural position of contracting them. This makes much stripping necessary, and a slow milker will never have patience to strip a long time. Partial milking soon dries the cow, and greatly reduces her value.

Correspondence.

NOTICE TO CORRESPONDENTS.—1. Please write on one side of the paper only. 2. Give full name, Post-Office and Province, not necessarily for publication, but as guarantee of good faith and to enable us to answer by mail when, for any reason, that course seems desirable. 3. Do not expect anonymous communications to be noticed. 4. Mark letters "Printers' Manuscript," leave one end open and postage will be only 1c. per 4 ounces.

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

SIR,—I am well pleased with the paper. Also seeing you give such valuable information regarding the foot and mouth complaint, &c. I being an old country man, and being in the butchering and grazing in the old country, know something about cattle. I have a great many farmers asking me about this disease; all that I can tell them is that it is disastrous with milking cows, stopping the flow of milk and bringing all cattle down to poverty. I do not think London, England, market is ever free from it, though they use every precaution.
I. R., Zimmerman P. O.

SIR,—A writer in the *Montreal Witness*, after praising your article in the July *Advocate*, on "A mixed husbandry," instead of so much wheat, goes further, and advocates dairying as a method of enriching land. I remember an old man, who thirty years ago, in the east of England, used to tell us stories about the large number of cows they kept when he was a boy; but they came to the conclusion that their farms were getting poorer, so instead of keeping so many cows, they bought and fattened cattle, using large quantities of oil cake with the turnips, believing that the cake much enriched the manure. You are aware that the rotation there is wheat, turnips, barley, hay, every fourth year. How many Canadians have seen from fifty to a hundred acres of turnips in one field? Some farmers here would think the man mad who would hire some one to cut and feed green food to his cattle all summer, as was done in England; but I see no reason why it should not pay in Ontario, as well as there, especially if they could save the liquid manure. The main objection would be the want of sufficient rain to make artificial manures available for plant food. This summer has been splendid in this direction. I once sowed, in the spring, a barrel of Brockville superphosphate on some half an acre of rather poor loamy land, for barley, and on one place sowed a double quantity, but could not tell that it did any good to that crop, or any one following. Well rotted manure harrowed in with fall wheat, "counted" at harvest this year; but there is very little "plump" fall wheat; but the spring wheat is almost like peas (not all cut yet). By the bye, an old shepherd in our country used to remark that they never had any trouble with ewes at lambing time till they began to sow guano on the land for turnips.
T. W. R., Bewdley.

SIR,—Enclosed please find two bugs which I found on my peach trees. Be kind enough to inform me, as soon as possible, if they are harmless or otherwise, and oblige a subscriber.
Wm. A., Queenstown, Ont.

[The insects both belong to the family of tree bugs, *Hemiptera*, all of which are provided with sharp beaks with which they puncture the soft tissues of plants and trees, also fruits and sometimes other insects, and feed on the juices so obtained. They are seldom found in sufficient numbers to require any remedy.]

SIR,—Will you kindly let me know through the columns of your next issue the best and least expensive mode of reducing bones to the proper state to apply to land as a fertilizer, and oblige?
E. R. B., Charlottetown, P.E.I.

[You can reduce your bones two ways. First by chemical action, and next, mechanically, by grinding. Chemically by sulphuric acid, diluted by 50 per cent. of water, and putting the bones in and allowing them to remain until they are dissolved or turned soft. They can also be reduced by covering with unleached ashes. After the bones are reduced by the acid, mix plaster as an absorbent. Mechanically, bones can be reduced by grinding; machines for this purpose can be had at a small cost. See the advertisement of Wilson & Bros., in August number.]

SIR,—Will you kindly answer the following questions in the next number:

1st.—What is the best time to prune apple trees or fruit trees of any kind; also evergreens?
2nd.—Which is better, to plant strawberries as late as the end of October, or leave them till spring; also currant bushes and gooseberry bushes?
3rd.—Where could I get a good book on the management of horses, including shoeing and care of both working and trotting horses?

A. A. M., Mitchell Square.

[1.—There is a difference of opinion on the subject. We prefer pruning when the sap has stopped flowing, or when the trees are in bloom; then again you can see where all the dead branches are.

2. The better time to plant strawberries is in the fall—early in September. Your only plan now for planting this fall is to get potted strawberries which will lose no time in transplanting. If these cannot be obtained wait until spring.

3.—Youatt, Williams, and Percival are all standard authors.]

SIR,—Could you tell me of any method to destroy burdocks beside pulling up by the roots?
D. E. R., Picton, N. S.

[Thorough cultivation is the only method we know of, and spudding out. Several plans are recommended, such as the application of coal oil and salt, but we doubt the practicability and efficacy of these in destroying them. All the stalks and burrs should be burned every year, and the plants cut frequently during the summer.]

FAILURE OF A LIGHTNING ROD.—J. H. B. sends an account of the burning of a barn by lightning. The barn was supposed to be well protected by a modern lightning-rod, composed of iron or composition wound with copper wire, put up at large expense by the agent or inventor himself, and there seemed to be a great deal of it among the ashes. He says the most interesting question among the farmers hereabouts just now is, Why was this barn burned by lightning if lightning-rods are a protection?

[The rod should be sunk in wet ground to a good depth, and could not have been properly insulated or properly erected; we know of no other causes. We are afraid there are a great number of rods put up in the country in a slipshod manner by unreliable firms. Farmers should see that they deal with honest firms. Try the Globe Lightning Rod Co. of this city.]

SIR,—Please give in your next issue a simple method for storing onions and cabbage, and oblige.
W. T., Thamesford.

[Make as deep a pit as can be made with the plow for onions and cabbages in a dry, sheltered place near the house, scraping out all the loose dirt with a hoe, and putting in some chaff or straw from the straw stack, and tramping down well. Then haul the onions from where they grew and pile them in carefully on this, and put more chaff on top and cover up with a foot of dirt from each side, and pack it smooth with the spade, where they can remain part or all of the winter, or until wanted. If they freeze it will make no difference; they will come out all right when the frost leaves the ground. Cabbage may be pulled up on a dry day and packed in the other end of the pit, roots up, and also covered with straw and dirt, when they or the onions can be taken out as wanted. The cellar is one of the worst places to keep onions or cabbages in, as it is almost always too damp or warm.]

SIR,—Would some of the many correspondents of your useful journal give me some description of the free grant land in Manitoulin Island, and also inform me where I could procure a copy of the Government Guide for the use of settlers?
G. W. B. S., Davenport, Ont.

SIR,—What depth should drains be dug? My land is mostly wet, and crops uncertain.
H. R., Charing Cross.

[Drains should be 3 feet deep at the lower end at least. When the ground is nearly level, and there is but little fall, the upper end may be only 2 feet. This will add 1 foot to the fall. But draining alone will not restore worn-out land. On the contrary, unless the land is manured, it will only help to further exhaust it. Still, it is a waste of manure to put it on wet soil.]

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SIR,—Having been down to the township of Brock, county Ontario, to purchase some Shropshire sheep, I was quite surprised to see some of their stock barns. Wm. Shier, the veteran stock breeder of that part, built his barn in 1879, 75x108 ft., on stone basement full size. James St. John, sr., built his barn in 1881, 80x80 ft. James St. John, jr., built his barn in 1881, 75x108 ft. Wm. Humphrey built his barn this season, 75x112 ft. Those barns are all in a mile square, and all on stone basement, full size. S. D., Kirkton, Ont.

SIR,—What is the matter with the sheep? During the month of May many of my sheep took sick and died, and on making a *post mortem* examination I found balls of wool in the stomach, and tape-worms in the intestines. Now, I would like to know if the wool-balls cause the tape-worm, or do the tape-worms cause the wool-balls? If you can inform us through the *Advocate* what will cure the disease, or prevent it, you will confer a great favor on this neighborhood, as many of my neighbors' sheep are afflicted in the same way.

R. D., Aberfoyle, Ont.

[There is no connection between the tape-worm and wool-balls, as you call them. The former originates from germs or spores that have been picked up from the excrements of dogs or sheep. Dogs are a main cause for all kinds of worms in sheep. The wool found in the stomachs of your sheep had been eaten by the animals from a depraved appetite caused by irritation of the intestines by the worms. The cause of death was, no doubt, from the worms, as the wool-balls, unless of large size, will not cause death. For cure, see letter from T. W. R., Bewdley P. O., in Sept. issue, page 277. The worms can often be expelled by a dose of linseed oil and turpentine.]

SIR,—Would you kindly let me know the best time to manure apple trees with barn manure, and when to prune them, as we have some apple trees about 8 years old which look well but bear nothing? Also, will osage fences grow in New Brunswick? If so, where can the plants be got, at what price, and when should they be planted?

D. S. S., Petitediac, N. B.

[The fall of the year is the best time to apply manure to fruit trees. For time to prune see our answer to A. A. M. in this paper. If planted properly and cared for while growing, should think the osage would grow in New Brunswick. We would like to hear the experience of some of our readers in that Province. Any of the nurserymen using our columns could supply the plants.]

HYBRIDIZING WHEAT.—H. W. N., Newmarket, Ont., asks how to hybridize wheat: To hybridize wheat is a very delicate operation, and requires botanical knowledge of the plant. The flowers of wheat are mature before they come; only the chaff and the germ is fertilized within the chaff before the is seen. For this reason wheat will not flower mix in the field, and the mixing must be done artificially. To do this the chaff is opened very carefully, one flower at a time; the anthers are removed, and the pollen from a different kind is brought and applied to the pistils. Great experience is required to do this successfully. The grains thus produced are sown precisely the same as any other, but of course are kept by themselves, and the grain produced is sown year after year until sufficient is procured for a crop. And then 49 out of 50 hybrid wheats may be worthless after all the trouble taken. The man who thus produces a good, new variety deserves a good deal more than he ever gets for it.

SIR,—I received a few plants of the mulberry, a premium for the *Advocate*. They have grown pretty well. Would you advise one to bank them around as a protection in the winter, also how would you advise as to pruning, etc.? How many pounds of timothy seed and alsike mixed should be sown per acre, also each separate?

J. E. W., Osprey, Man.

[Banking around would not prevent the frost reaching them. Better tie straw pretty thickly around the stems, and mulch the roots with straw or litter. The danger is not so much from freezing as from thawing and freezing on bright sunny days. It is not advisable to prune the young

by other trees it forms a rounded head, and appears at a distance somewhat like an apple tree; the leaves are round, heart-shaped, of a bluish green above. the foliage has a remarkably clear and healthy appearance, and is not liable to the attacks of insects. The flowers are of a dark peach-blossom color, and are produced, before the leaves appear, in small clusters, not only on the wood of the previous year, but upon branches that are several years old and even upon the trunk itself. Though individually small, the flowers are in such profusion as to quite cover the tree, which, when planted for ornament, should be set against a background of evergreens to show it to best advantage. The fruit is a flattened pod with numerous seeds. The wood is hard and capable of receiving a fine polish. Upon the continent of Europe the flowers of the European species are used in salads and fried in butter as fritters, and the flower buds are pickled in vinegar. It is said that the early French settlers in this country made a similar use of the flowers of the American species, which have a pleasant acid taste. This is one of the native trees which has received too little attention from planters, as it is pleasing at all times, and highly ornamental in early spring, flowering at the same time with the Chinese magnolias; it may be planted among them in groups with fine effect. It deserves to be classed among our finest ornamental trees.



THE RED BUD OR JUDAS TREE (*Circis Canadensis*.)

trees, except to cut away the dead portions, if there are any, in spring; when the trees are older they can be trimmed to any shape required. About 6 lbs. of clover and 4 of timothy mixed, or 8 lbs. of clover and 10 of timothy per acre, if sown separately.]

[A large amount of correspondence is unavoidably crowded out of this issue, and will appear in our next.]

The Red Bud or Judas Tree.

We give an illustration above of this very ornamental native tree. It is a small tree, rarely exceeding thirty feet in height, and found southward and westward, though especially on the banks of rivers. Tradition has it that Judas Iscariot hanged himself on a tree of this species, hence the name. When not crowded

The Government Sale of Stock.

(Continued from page 297.)

The following list comprises the stock sold by the Model Farm in the afternoon:

SHEEP.

RAMS.

- 3-Sheep Cotswolds, Wm Argo, Eden Mills, Ont., \$30.
- 1-Shear imported Southdown, D Johnston, Campbellford, \$42.
- 3-Shear Oxford Down, Joseph Sherman, Stratford, \$45.
- 3-Shear Shrop, T Shaw, Hamilton, \$52.
- 3-Shear Southdown, H B Jeffs, Bond Head, \$46.
- Aged Merino, George Hood, Guelph, \$31.

SHEARLING RAMS.

- Four Cotswolds sold as follows:—One to W C Smith, New Hamburg, \$20; one to Thomas Manderson, Guelph, \$14; one to D Linderman, Eramosa, \$14; one to T C Stark, Gananoque, \$31.
- Oxford Down, R Gowan, Walkerton, \$23.
- South Downs, one each to Charles Kay, Fergus, \$17; D J McLennan, Glergarry, \$15; F J Chadwick, Guelph, \$18.

COTSWOLD RAM LAMBS.

- Henry Arkell, Arkell, \$10; W Barker, Puslinch, \$8; John Moyer, Kossuth, \$10; T Taylor, Hazel, \$8; D J McLennan, \$8; Henry Webster, West Garafraxa, \$9; Ward Harrison, Shelburne, \$21; W Ramsay, Eden Mills, \$5.

OXFORD DOWNS—RAM LAMBS.

- W C Smith, Hamburg, \$20; Fred Penton, Maple Hill, \$18.

SHROPSHIRE DOWNS—RAM LAMBS.

- W Smith, Innerkip, \$28; S Witman, Kippell, \$27.

SOUTH DOWNS—RAM LAMBS.

- J Cormack, Rockton, \$7; S Witman, Kippell, \$6; R Andrew, Palmerston, \$17; G Garbutt, Etobicoke, \$15; A R Kidd, Warsaw, \$13; D J McLennan, \$13.

COTSWOLD EWE LAMBS.

- George Thompson, Elora, two for \$18; W Argo, two for \$14; J G Joyce, Guelph, two for \$14; J Hume, Seymore, two for \$24.

LEICESTER—EWE LAMBS.

- Arch Cearns, Flesherton, three for \$21.

OXFORD DOWN—EWE LAMBS.

- Dr A Norris, Spencer, N. Y., three for \$60.

SHROPSHIRE—EWE LAMBS.

- E Rennie, Hamilton, two for \$48.

SOUTH DOWN—EWE LAMBS.

- W Howitt, Guelph, three for \$45.

COTSWOLD—EWES.

- J R Martin, Cayuga, one for \$11, and pairs to the following for the prices given:—Thomas Waters, Eramosa, \$18; J C Stark, \$26; J R Martin, \$20; Wm Rudd, Guelph, \$24; J W Overholdt, Welland, \$28; J R Martin, \$40; A C Cornell, Burford, \$24; J C Stark, \$28; A C Cornell, \$20 Geo

Taylor, Rockwood, \$22; A C Cornell, \$26; Thomas Howe, Summerville, \$24; A C Cornell, \$16, and J W Overholdt three for \$36.

LEICESTER EWES.

Sold in pairs for the following sums:—J Neilson, Glengarry, \$20; George Stewart, Flesherton, \$26; Thomas Gourley, Mitchell, \$18; R Whiteman, Marnock, \$28; George Thompson, Elora, \$22; E V Thompson, Guelph, \$20; James McBeth, Eden Grove, \$20, and three to J R Martin, \$33.

OXFORD DOWN EWES.

Sold in pairs as follows:—W C Smith, \$58; G Cassey, Ferguson, \$80; Jos. Sharman, \$66; G Cassey, \$50; J Sharman, \$62.

SHROPS—EWES.

Sold in pairs:—J Howe, Kimberly, \$72; J B Snider, Waterloo, \$62; Henry Watson, Guelph, \$66; Samuel Witman, \$50; Thomas Ellis, Kimberly, \$84; Charles Howitt, \$68.

SOUTH DOWN—EWES.

Pairs sold as follows:—George Garbutt, \$54; Samuel Witman, \$36; Wm Howitt, \$30; John Cornock, \$30; L A Brown, Dunbovine, \$32; J Martin, \$30; Wm Howitt, \$36; James McBeth, \$48; James McBeth, \$48.

FAT SHEEP.

TWO SHEAR GRADE WETHERS.

Sold in pairs as follows:—James Glennie, \$34; Geo Hood, \$30; Geo Hood, \$34; Geo Hood, \$24; Geo Hood, \$34.

SHEARLING GRADE WETHERS.

Sold in pairs:—Mark Langdon, \$24; Geo Hood, \$24; do. do., \$24; do. do., \$24.

SWINE.

BERKS—BOAR PIGS.

One each as follows:—Eli Gregory, Port Dalhousie, \$31; W C Smith, \$17; Amos Cutler, Lobo, \$20; T Day, Cargill, \$20.

SOW PIGS.

One each as follows:—Mark Langdon, \$16; B N Howson, Hamilton, \$11; Wm Dickson, Mildmay, \$10; J Segmiller, Walkerton, \$10; E V Thompson, Guelph, \$16.

BOAR PIGS.

One each as follows:—John Hower, Guelph, \$12; R J Clark, North Dumfries, \$20; K Montgomery, Kincardine, \$24; W Hull, Erin, \$30.

SOW PIGS.

One each as follows:—John Hower, \$8; W Hall, \$8.

ESSEX SOW.

John Hower, \$25.

POLAND CHINA BOAR.

John Hower, \$12.

SCOTCH COLLIE DOGS.

Sold each as follows:—Archibald Gibson, \$17; Major Greig, Toronto, \$14; A J Joyce, Guelph, \$8; H Bigby, O. A. C., \$11; E A Saxton, O. A. C., \$9; James Parker, Guelph, \$8; Simon Beattie, Markham, \$14; John Hope, Bow Park, \$13.

The total sum realized for cattle, pigs, sheep and dogs was \$11,720, and the sale concluded at six o'clock.

Farmer's Clubs.

ELMIRA, N. Y., FARMER'S CLUB.

We condense the following report of a recent meeting of the club from the *Husbandman*. Among the subjects for discussion was "The best way to dispose of old straw by putting it upon wheat land."

O. M. Wixon. I would work that straw into the soil by dragging. I drew eight big loads on ten acres of land plowed for wheat. After spreading it as evenly as I could, I dragged the ground four or five times, and kept men engaged spreading the straw after the drag rolled it up in windrows, as it did. By repeated working I got it mostly into the soil, then I sowed wheat, and dragged that in well. The crop measured 321 bushels from ten acres, and I think I was indebted to the straw largely for the good yield. The soil was clay—quite heavy. The wheat was sown broadcast.

C. Compton. Straw may be spread after the seed is sown. I don't know how thick, but probably the plants would come up through three inches if not closely packed.

W. A. Armstrong. Neither of these ways is the best. There is no practical need of working the straw in at great cost of labor, and I doubt if the effect will be so good when worked into the soil as when the straw is spread upon the surface. It is true that something is to be considered with regard to the requirements of the soil. In very heavy land straw worked in by plowing or otherwise tends to lighten the soil and correct a fault; on the other hand, straw worked into light soil increases a difficulty. The purpose of spreading straw on wheat fields is not to enrich the land; fertility must be provided in some other way. The real object is to protect the plants from exposure during winter. I would not put straw on three inches thick, just after sowing the seed, for there can be no doubt that such covering would have the effect of reducing vitality in the plants, growth would be spindling and weak, the color yellow, indicating debility, and the plants in this condition would be more liable to take injury in winter.

After the plants have made such growth as they may in autumn before freezing, when they are vigorous, apply the straw mulch not thick, but evenly, to shield the wheat. That is precisely the object which we expect to accomplish when spreading straw on crops. In this case my opinion is that it will be well to put the straw covering on after fall growth is substantially completed, then spread evenly and so thin that light may reach the plants below. In this way every purpose contemplated will be accomplished, the wheat will be protected from raw winds, the straw will hold snow, which in itself is a useful covering, the land will be in the best condition for seeding with grass in the spring, or if timothy is sown this fall, that also will have suitable protection.

President McCann. I have spread straw on rye before the seeding and I found the crop much better on the land so treated than on other land left bare. The grass seeding was also better. I believe the right way to use straw on wheat or rye is to apply it after the plants have obtained some growth, for when they are compelled to work their way through much thickness of straw or other covering, they must necessarily be enfeebled. There is one important matter to consider when using straw as a mulch on wheat or rye. It should be free from foul stuff, otherwise it may do injury by seeding the land with weeds.

C. Crompton. How much straw would you use on an acre?

President McCann. I cannot answer the question definitely. I should say a large load at the least, perhaps more. The main point to consider is that it be evenly spread and not very thick so as to impede growth. As to the amount every farmer must use his own judgment.

The following also came up for discussion: I have a piece of land that has been in pasture many years that ought to be re-seeded. It is hilly and will be hard plowing. Now I should like to be advised if I can re-seed this ground without plowing. If so, how to go to work.

W. A. Armstrong. Yet there is a way. I have tried it with very full, but not lasting, success. The best treatment, when land can not be plowed, is to draw on stable manure enough to make a good dressing, draw it as early as practicable in autumn, but it will do if the work is not done until snow comes, say in January. Spread it as drawn, and spread so evenly that every portion of the land is covered. That is all until spring. As soon as frost leaves, or even when it has left but three or four inches at the surface, sow timothy, clover, orchard grass, red top, June grass, and every kind, then put on a heavy brush-drag and work the manure a little into the surface. Of course, it can not be thoroughly worked, but the seed will attach to the manure, and by brushing the field over thoroughly the manure will be slightly coated with soil. The effect will be to supply the right conditions to promote growth of the seed, and chances will favor a heavy growth of grass that season. In my experience I have obtained a heavy growth as I ever got from any treatment, but it is not lasting. The second year the crop will be lighter, the third year lighter still. Exhaustion comes on too rapidly; in three or four years it is probable that the soil will go back to the old condition.

President McCann. If it is possible to plow the land, then raise one crop, and turn the rotted sod back for another on which grass seed may be sown; that may be better. It is never safe to seed on land already in sod; the chances of success are diminished by the fact that the surface is occupied by the roots of weeds or something else, but with manure it may be possible to get partial success.

The Markham Farmers' Club.

The September meeting of the Markham Farmers' Club was held at Mr. William Rennie's farm, there being a large attendance of members, with their wives, sons and daughters. The meeting was called to order by Mr. Gibson, president of the club, who referred to the pleasing fact that so many members were in attendance, which, he said, was an invariable occurrence when the meetings took place at Mr. Rennie's, as there was always much to be learned from the practical way in which he conducted his affairs.

Mr. Reesor then addressed the club, expressing his admiration at the numbers present, which he claimed was a compliment to Mr. Rennie, who managed his farm with such ability that it was now recognized as one of the model farms in Ontario,

where many practical lessons in agriculture could be readily learned by the most unobservant.

Mr. Wm. Rennie thanked the members for meeting at his residence, and was glad the veteran farmers' club was increasing in members as well as in usefulness. With regard to farm buildings, he had given the subject some attention, and in order to more readily convey his ideas to the members, he had prepared a plan of what he thought would suit the requirements of farmers generally. Mr. Rennie then entered into a detailed description of the building, which was a large one, capable of accommodating live stock, storing fodder, roots, grain, farm implements, etc., being oblong in shape, with doors in each end, and traps in the floors for the convenience of filling bins in the lower story with roots, etc. Mr. R. claimed that a great deal of time would be saved by farmers in the busy season if such a building was used, as every product of the farm could be stored in one building, which would lessen the labor not only then, but in winter time, as cattle stalls could be so arranged that the cost of attendance to feed them would be greatly diminished.

Mr. Boyd referred to the benefits the club derived from meeting at Mr. Rennie's, as his system of farming was such as to commend itself to all who had inspected his farm, and if the style of barn he had described to them would be as successful as his farming, the club would be under great obligations to Mr. Rennie.

A RUN THROUGH MR. RENNIE'S FARM

Mr. Rennie's farm is distant from Toronto some 15 miles, and contains about 120 acres, some 15 being in bush. The land under cultivation is entirely free from stumps, stones, and Canada thistles, well underdrained, almost level, the soil being clay loam, in some places slightly inclined to heaviness. The buildings are located in the centre of the south front of the farm, and consist of a spacious two-story dwelling, gardener's residence, driving shed and root cellar, live stock stables, barn, and piggery, six in all. The dwelling house is surrounded by a well kept lawn, ornamented with a handsome rockery, filled with choice plants. The display of broken-down wagons, superannuated reapers, rusty plows and headless churns that are usually found in farmers' lawns, were conspicuously absent. Immediately north of the dwelling house is a neat and snug cottage occupied by the gardener, while a little to the west is the driving shed and cellar, where every convenience for the rapid performance of work at once meet the eye. Further west are the piggeries and live stock stables, which are models of neatness and cleanliness, there being ample accommodation for twenty-eight head of cattle and a score or two of pigs. To the north of this, and abutting it and the driving shed, is the barn, with a lower story for the accommodation of horses, etc., where the same neatness that is visible in other buildings is at once perceptible. In the square formed by the four buildings just described are hundreds of loads of fine manure, so rich that one can scarcely take a step without treading on an incipient mushroom, this valuable material being intended for use next season on the field set apart for roots. South-east of the piggery is the "pet patch," or trial ground, where the eye is gladdened by the appearance of flowers of all hues and plants of almost every description. One portion is set apart for experiment with different varieties of fall wheat, thirty kinds being under test; among them are Martin Amber and Bonnell, samples of which were sold for the first time in Canada this fall. Eight new varieties, none of which have not yet been introduced into Canada, are also being experimented with, and are known as Golden Prolific, Golden Russian, Oster's Hybrid Clawson, Oster's Amber, Velvet Chaff, Hybrid Mediterranean, Pure Gold, and Red Russian, all of which are doing well. In another plot experiments are being made with grasses, five different kinds being under test. For permanent pastures two are under test, one for low lands and the other for high lands, eleven different varieties of grasses being used. Next in order comes a preparation for hay to be followed by a meadow, in low lands, adjacent to which is a similar experiment for high lands, the next plot being devoted to experiments with a mixture known as the Rapid Growing, from which half a dozen crops can be gathered every season. All these mixtures are, so to speak, Mr. Rennie's own inventions, and comprise every useful variety of grass known in Canada. About 40 acres of the west front are seeded with clover, 27 bushels of seed having been sown to the acre, and in this fine pasture are browsing 28 steers, several milch cows, and about 50 head of

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sheep. As soon as winter sets in Mr. Rennie houses these animals, feeds them on roots, meal and grain, and sells them early in the spring. Through this pasture field runs a stream, affording ample water for the cattle, a luxury that is not often enjoyed without considerable expense to the owners. In order to give our readers an idea of Mr. Rennie's practical way of managing affairs, it is only necessary to state that this stream is composed of the entire drainage of his farm, and furnishes a water supply for his cattle of an event temperature. The central field of the farm, another 40 acre stretch of very level land, is divided by a road, the southern part is in barley stubble, now being ploughed, and next year it will be devoted to roots, the northern part being a grand meadow. Passing through a gate an entrance is made to the eastern field, about as large as the one just described. The northern section is in meadow, while the south is devoted to roots, ten acres being filled with mangle wurtzels. Among the new varieties noticed were Red Tankard and Golden Tankard, this being the first crop of the former ever raised in Canada. All the varieties of sugar beets worthy of cultivation as food for cattle occupy the next plot, which is followed in succession by seed onions of the Large Red Weathers field variety, Rennie's Selected Nonpareil lettuce, Golden Wax beans, Dwarf German Wax beans, and all the new varieties of potatoes which are cultivated for seeding purposes. This brief sketch will give our readers an idea of how Mr. Rennie manages his farm, his first effort apparently being to establish a system. Indeed there is a method connected with the performance of every detail, no matter how trifling, and a reason is given why it should be so done. The owner of this farm is thoroughly practical, very observant, with means at his command and brains to know how to use them. He has around him valuable assistants, among them being Mr. Burgess, the gardener, who knows more about roots, horticulture, Canadian thistles, octagons, and parallelograms than any other man of his years, and he has almost reached three score and ten, yet he is full of life and vigor. Since Mr. Rennie brought his broad acres to their present perfection, he has stirred up the ambition of some of his neighbors. The result being that five of the competitors in the prize farm contest belong to Markham township. And it is a pity that the owner of the farm immediately south of Mr. Rennie was not among the number, as he has fine land, capable of being vastly improved, but unfortunately he devotes too much attention to the culture of Canada thistles and he has succeeded in raising so admirable a crop that the thistles have entirely outstripped portions of a field of oats.

Pig Breeding.

BY W. GOODWIN, JUN.

SELECTION OF SIRE.

All breeders who desire to improve their pig stock or keep up their herd to a high state of excellence, must be careful in the selection of a sire. A certain amount of laxity may be permissible in the females of a herd, when the sole object is to breed for slaughter, but even then a high-class boar is of prime importance, and much more so when the formation or maintenance of a pedigree herd is the breeder's aim. It is to the male in a very considerable degree we must look to the good qualities of the future herd; and were it for no other reason than the comparative ease with which a common herd is improved by the judicious use of a few well-bred males, this would be of paramount consideration. It must be remembered, however, that a faulty or under-sized sire has as much, or even greater, propensity to deteriorate the progeny of a herd of, say, twenty well-bred sows as a high-class one has to improve those of twenty under-bred ones. Consequently, while the introduction of an inferior dam to a herd may result in comparatively small loss, the selection of a faulty boar may do almost irreparable injury. It is

TO THE MALE WE LOOK FOR QUALITY.

The boar should be of perfect symmetry, and show in a marked degree all the attributes of the most improved types: carrying, with a masculine appearance, a head far removed from coarseness, and whose broad jaw and sharp face betoken great aptitude to fatten. He need not necessarily be upon an extra large scale. Indeed, the short, level-backed animal, of equal thickness at shoulders, loins, and hams, and generally a compact form, is

my choice. Fine in bone, with hams and shoulders almost down to the ground, well covered with long silky hair, betoken good constitution, and ameliorating both the extremes of heat and cold, and whose fine quality is a guarantee of their careful breeding. Such is the typical sire.

Coarse bristles are the accompaniments of coarse hides, and *vice versa*; and it is a matter of importance, though frequently overlooked, whether the breakfast rasher is, as sometimes, nearly one-fourth rind, or whether the latter is almost as thin as parchment. In addition, the quality of meat is always finer in the latter case than in the former. Most of the improved Essex I have met with have had, in a marked degree, this high excellence alike of skin and quality of meat.

Having found an animal that individually combines the essential good qualities, it is necessary to inquire about his progenitors, and especially his dam. I have found that, as a rule, the young male perpetuates in marked degree the characteristics of his dam, and the young female of her sire. It follows, then, that, however expedient it may be for the pork-producer to breed from inferior or faulty female specimens of the family, the boar-breeder must only rear from not only a well-bred but a good-shaped sow of the highest quality and characteristics; not only so, but her nursing powers must be duly considered, as they are of the greatest importance. It is as requisite that the pig should be able to nurture her offspring, and be gifted with a plentiful supply of milk, as it is for the dairy cow to be so, while there is as much difference in this respect between individuals of the one tribe as the other. Yet it is only from a dam so constituted that a young boar should be selected, as this milking gift is to a very large extent inherited.

The difference between a sow whose milk is plentiful and one who has but a scanty supply is very apparent in their offspring. Those of the former grow with rapidity, and lay a foundation for future thrift and early profit, whilst the latter's never fully recover their early stint. I strongly advise, then, that boars should be selected from dams who possess good milking properties. As fecundity is a matter of great importance in the pig, and the capability of nursing a numerous litter of quite equal importance, it is well to see that the sow has a full complement of teats, for Master Piggy does not brook any partnership in the one he has selected. Therefore a sow should have from twelve to fourteen well-developed teats, and then she has a chance of rearing a good litter. In like manner I prefer a boar selected from large litters and from a prolific sow.

In selecting sows for the general stock, breadth and depth of frame are of paramount importance. With this should be allied as many of the characteristics of high quality as can be obtained, when a breeding herd is intended; coarseness, either of hide, hair, or head, should never be condoned, and though it is not absolutely necessary to adhere to the compactness of form, as in the boar, still the sow should be built upon level lines, and be quite even and symmetrical.

LARGE-FRAMED BOARS.

When it is desirable to increase the size of a herd, a boar upon a larger scale may be selected or introduced; but, as a rule, the symmetry and quality should be the prominent features of the boar, and frame, united to as much symmetry and quality as possible, be those of the sow. Taking the White breeds as examples: to improve the quality of the Middle breed, or give greater scale to the Small, select a Middle sow and Small boar; and, in the same way, when it is desired to increase the size of the Middle, take a well-bred sow of the Large breed, and a good little boar, and from these, with careful breeding, a class of pigs with all the frame and fine growth of the Large, with the feeding qualities and hair of the Middle, might be obtained. This, it appears to me, is not sufficiently appreciated; at least, the great majority of the Large White pigs I see lack early and profitable aptitude to fatten. When

PORK OR BACON

is the sole aim of the breeder, I am free to confess that the produce of what may be designed Medium-bred sows are profitable as any, and perhaps crosses, as between the Large Middle White, and the Berkshires, are most profitable of all; but after the first cross these are comparatively valueless for breeding purposes. Some such breeders of White pigs, when grazing is resorted to, find it more economical to keep thickset sows of Middle type and a lengthy large-framed boar. They say

that the Middle class of animals are kept more economically than the Large, consequently it is cheaper to keep twenty small eaters and one large eater, than *vice versa*. Their reasoning is correct, and when all the young are consigned to the butcher it is a plan that has its advantages. But the sows should be the selected ones out of litters having a tendency to free growth, while the boar should, though following the type of the Large, have Middle blood in his veins. Nevertheless, under such circumstances it is rarely we find uniformity in the herd, and it should only be resorted to in exceptional cases, and with the utmost care and consideration when high-class stock is kept for breeding purposes.

OUR NORTHWEST.

The Hon. H. G. Joly gives some good advice about the Northwest in the matter of immigration, and also to farmers about the introduction of noxious weeds. We hope our farmers in this country will profit by his remarks, and follow his instructions. In writing to a contemporary he says:—

SIR,—The Northwest is the land of promises for the farmer, and everything connected with farming must be a matter of interest with you. One of the great advantages of your virgin soil is that it is still free from the noxious weeds so plentiful in our old settlement of the east, where they have been imported from Europe. How long will it remain so? I was sorry to see in western Manitoba, close to the most beautiful fields of grain, along the trail, a number of plants of the wild mustard. There was none among the grain, only on the side of the road. Evidently the seed came from afar, and there were not many plants.

It would take but a few moments to pull them up, before they are ripe; if allowed to ripen and scatter their seed, every farmer knows how much trouble they will give. It looks such a pity to let that weed and other weeds of older countries, invade your land. Now is the time to stop them; keep them out by a regular "quarantine" as you would the plague, and if you find that they have broken through, and on some places, despoil them before they can multiply and do mischief.

(By "quarantine" I mean that all imported seed ought to be inspected, and, if possible, all grain sold for seed also.)

I hope you will take my intrusion in good part, though perhaps I ought not to apologize any more than a traveller who would come in to warn you that your barn was on fire.

Believe me,

Yours truly,

H. G. JOLY.

Quebec, Sept. 10, 1883.

PROFESSOR TANNER'S RETURN FROM HIS TOUR OF INSPECTION.

Professor Tanner has returned from the North West, and although he is reluctant to anticipate his formal report—which will be published immediately on his return to England—he states that he does not find the land nor the water of that uniform high quality which some have described it to be. With prudent care and proper exercise of good judgment, both, he says, may be obtained of a satisfactory character, and under conditions which will favor successful results. He did not limit his journey to the railroad, which passes through land greatly below the average quality, but drove over a large extent of prairie lands, thus coming in direct contact with the farmers holding the land. His report is favorable as regards the crops, and even those settlers who commenced work this spring have succeeded well with their first crops under the very imperfect tillage given. He is greatly pleased with the Bell farm, but regards it as holding an exceptional position, both by reason of its large extent and the large capital employed upon it. He regards it as being of high national importance, as showing the perfection and ease with which a good system of farming may be established and carried out.

With all the attractions of the prairie, he still regards the older-settled Provinces as possessing many and great attractions for those English and Scotch farmers who cannot sacrifice the home comforts who are so dear to their families. He very truly urges that these considerations must enter largely into the calculations of farmers, who for any reason desire to give up farms in the Old Country, and who cannot face the deficiencies of a newly-settled district. For these reasons he re-

gards a process of replacement desirable, whereby English and Scotch farmers may release those owning land in Ontario and other similar districts, and enable the latter to pioneer into Manitoba and the North-west.

Farming in Manitoba.

I have thought, perhaps, a few remarks from me may escape the waste paper basket. I notice some of the Ontario papers are writing very strongly against this country, I cannot say whether from personal experience or from hearsay, but am of opinion it must be the latter; the statements made must be very confusing and unsatisfactory to the intending settler, and are very apt to deter many a good man from coming here. I took up land here, and began breaking up the virgin soil in April, 1882, and have just commenced to harvest my first crop. We have three self-binders working on the farm, taking three horses each. I began cutting wheat on the 16th of August, and hope, if favorable weather intervene, to finish cutting in about three weeks. I have forwarded by this post samples of the grain now being cut. I may add that I commenced seeding on the 16th April last. I think these facts will be far more convincing to your readers than anything that may be written by a prejudiced writer as to the capabilities of the country. As to the root crop, I have never before seen such a fine sample as we have this year; they grow here to perfection. With regard to fruit I brought some small fruits with me from Ontario. And so far they are a success; a sample of the foliage of the "Wilson Albany" strawberry I have forwarded, but shall be able to give you more information on this point at some other time. I also put in some studs of "white ash," and of other Ontario forest trees, and they are up and looking well. Cattle can be, and are, raised here very successfully, and become quite fat on the prairie grass without any grain whatever. As in Ontario, we have to shelter them during the winter, but with this advantage, no grain is necessary; we brought our stock through last winter in good condition and without any grain. On the subject of the stated exodus to Dakota, we should know little here but for the Ontario papers. As a fact, two young men left this neighborhood for Dakota, after selling their homesteads, the principal reason being that they had friends there. This is the only case which has come to my knowledge.

On the other hand, there are several settlers around from the States, in fact my next neighbor, who has land adjoining mine, is from Kansas, where, after seven years residence, he contracted the ague, and lost nearly all his means; he is delighted with the change. Personally I consider the soil all that can be desired, and the crop which I am now cutting is quite equal to, if not superior to any I ever saw in Ontario.

As to the climate, it is far more enjoyable than Ontario; the winter, although cold, is not unpleasant; we were able to work out nearly every day, with very little inconvenience; the depth of snow never exceeded twelve inches at any one time, and the roads consequently were excellent for sleighing; we had no rain fall the whole winter, so that stacks were left open without any fear of injury. The summer is all that could be desired; perhaps I should draw attention to the fact that there is a very heavy dew each night, which appears to be sufficient to insure a luxuriant growth of all kinds of vegetation, and there is also a very large proportion of sunshine, which in another important element in farming.

ROBT. LANG.

Oakland Heights, Oak Lake, Manitoba, August 20, 1883.

Fruit Culture in Manitoba.

ADDRESS BY MR. WILLIAM SAUNDERS AT WINNIPEG.

At a meeting lately held in Winnipeg to discuss the question of fruit raising in the Province, a number of experts gave their opinions.

Mr. Saunders stated that in Ontario he had been accustomed to speak of injurious insects. He had brought his collecting apparatus with him, but so far he had been unable to find any insects except a few house flies and an odd mosquito here and there. (Laughter.) He had accordingly given part of his apparatus to a gentleman who was going on to Calgary. He had that day examined with some interest some of the native wild plums with the idea that he might find some traces of curculio, but he had not found any. He thought we might look forward with some confidence to being able to grow plums without the great trouble experienced in Ontario from that source. He was also glad to see

currants were free from the green worm which attacked the leaves in Ontario, necessitating the general use of hellebore. He had also found no trace of the Colorado beetle, and he congratulated this Province on the absence of these pests. In reference to forestry, he differed to some extent from his friends who had preceded him. He did not believe Mr. Beadle's theory concerning the roots of the apple tree. (Laughter.) He did not see why, on the same principle, the roots of the plum tree and the ash-leaved maple should not be similarly affected. He would also try to start with a higher standard of apple than the crab. If seed were grown from varieties which ripen far to the north, the seedlings raised from these would be hardier than the parents. Cultivated varieties of fruit did not reproduce themselves exactly. At Sault Ste. Marie he had found farmers trying to grow apples from the more highly favored portions of Ontario! But they had failed even with the Red Astracan, which was considered a hardy variety. A farmer had, however, raised seedlings from the Fameuse, and the result had been that the growth was reasonably large; and of the varieties of fruit many were almost equal to the Fameuse. That experiment was worth repeating by taking the seed of fruits that ripened here and sowing them. The crab originated in a climate which was not subjected to the high temperature experienced here, and was very liable to blight. In many parts of the Western States, as Iowa and Minnesota, great difficulty was experienced in growing crabs from this cause. The difficulty might be partly got over by protecting the trunks of trees. In the spring, while one side was exposed to the hot sun, the opposite side was frequently exposed to a freezing temperature, and this brought about a diseased condition of the tree. He held that seedlings would probably produce good varieties, as they would be free from the danger from the disturbance caused in the case of root-grafts, from the fact of the root and the stalk being very different in their character, and from which cause disease was apt to result.

In connection with the subject of small fruits, the Black Cap raspberry was worthy of attention, and the Cuthbert red variety was one of the largest and best flavored of these fruits. The fruit of the Black Cap came in a little earlier than the varieties of the red raspberry. The Mammoth Cluster and the Gregg were also black varieties that were tolerably hardy, and they succeeded wherever the Cuthbert and the Hanson succeeded. Crosses between the Black Cap and the red varieties proved very hardy. (Applause.)

Magnificent Wheat.

A PRODUCE OF THE CANADIAN NORTH-WEST—EASY CULTIVATION.

A simply superb sample of wheat grown in the Canadian North-west was shown on the Corn Exchange, Montreal, a day or two ago. The sample was beautifully regular, perfectly free from admixture of other varieties of wheat, or of other grains or seeds, and was as clean and bright as if passed through brushes. The berry is clear red, bright skinned, hard as flint and very plump. The wheat is of the famous Fyfe variety. It was grown on the Bell farm. The preparation of the land consisted simply in breaking up the prairie; no back-setting was done whatever. Yet the eight hundred acres under wheat yielded about twenty-three bushels to the acre, or 18,400 bushels. This wheat will be sold for seed in the North-west. The efforts of a few prominent milling firms and others to introduce good varieties of wheat in the North-west is a shrewd business move, and it is at the same time doing a great benefit to the country.

Before winter sets in look out for splits in trees. Remove the limbs or securely tie them up. Where crotches have been cracked and weakened by heavy bearing, they are often broken by the snow and ice of winter if this precaution is not taken.

GREEN MANURING.—The best farmers never allow land to be idle. With ground, as with people, idleness is productive of mischief. Weeds will grow if no crop is planted. As soon as rye or wheat has been harvested sow peas or some fast growing crop. Plaster applied in connection with this will greatly enrich comparatively poor soil.

Select the land that you are going to plant to potatoes the next year. If it is in grass, top dress with manure and let it lie until spring. Stubble should receive an application of manure, and then be turned under. If the ground is wet and you cannot afford to underdrain it, put it to some other use, but do not risk potatoes on it.

Special Notices.

The Waterous Manufacturing Co., of Brantford, Ont., have from a small beginning built up one of the most extensive and useful manufacturing establishments in Canada. They make a large number of agricultural steam engines; the number of the last turned out when we were there was 859. Milling machinery is a very great interest. The company send the machinery for grist mills to all parts of this Dominion. But what gives this establishment such a world-wide renown has been their portable saw-mills. These mills have been tested against machines made in England and the United States, and have carried off the prizes and given such satisfaction that orders are being continually filled from Germany, the States, South America and Mexico. Three of their engines have been sent to England. A saw mill recently ordered by the C. P. R. was sent to Montreal, thence shipped to England, re-shipped and sent to the Hudson Bay, this being the cheapest way to get it up there. There are but comparatively few manufacturers in Canada who can command a foreign market.

The Cockshutt Manufacturing Co., of Brantford, Ont., at the present time stand at the head of the list as manufacturers of sulky plows and sulky corn cultivators. They spare no pains to procure the latest improvements, and their implements have a very high reputation, second to none in Canada.

George White, of London, Ont., manufacturer of farm engines, has been so successful with his engines that he has gone to England to import one of the best gang plows. He is intending to construct them and his engines to draw them. These he intends to adapt to Ontario and to the prairies.

A very extensive manufacturing company has been formed in London, Ont., with a large capital, and farm machinery is to be constructed on a more gigantic scale than has yet been done in Canada.

David Maxwell, of Paris, Ont., has made a new reaping machine which can be constructed at one-third less cost than the old cord binders, and can be worked with one horse less, and without wasting so much grain as has been done by some of the old machines.

The Fruit Growers.

The annual meeting of the Ontario Fruit Growers' Association was held at Guelph, on the 25th ult., W. Saunders, Esq., F. R. S. C., President, in the chair. During the year the membership has increased from 1,839 to 2,600. The receipts, including the Government grant and balance from last, were \$5,473, and the balance on hand after providing for expenditure is \$637. After the President's address the election of officers took place with the following result: President, Wm. Saunders, London; vice-president, P. E. Buck, Ottawa; directors, John Croil, Aultsville; A. A. Wright, Renfrew; R. J. Dunlop, Kingston; P. C. Demsey, Trenton; Thos. Beale, Geo. Leslie, jr., Toronto; James Goldie, Guelph; A. M. Smith, St. Catharines; T. H. Parker, Woodstock; A. McD. Allan, Goderich; J. M. Denton, London; Hugh Smith, Sarnia; Charles Hickling, Barrie; auditors, John Carnegie, M. P. P., Peterboro, and Charles Drury, M. P. P., Crown Hill, Ont.

Michigan has a law making compulsory the destruction of trees infected with yellows, and prohibiting sale of peaches from them. The Commissioners appointed for the work are now ordering the cutting and burning of whole orchards in Van Buren County.

Surface manuring is especially effective on sandy soils, and a light dressing yearly is far more beneficial than heavy coatings once in three or four years. But the best results on sandy soils is when they are dressed with a compost of manure and clayey muck.

The experiment now being tried at Sterling, Kan., demonstrates not only that sugar can be made, but that the profits of manufacturing the cane are unusually large. The yield is reported to be from five hundred to six hundred pounds of sugar per acre, besides about fifty gallons of excellent molasses.

Another "agricultural" product for the leading fair of 1884: The Board of Directors of the Industrial Exhibition Association met recently, and decided to hold next year's exhibition from the 8th to the 20th of September. A proposition to transfer the Zoological Gardens to the exhibition grounds was suggested, and seemed to be favourably entertained, but definite action was delayed.

The Household.

Correspondence on home work, duties, etc., from our lady readers, solicited for this department.

Family Letters.

When John and Mary leave home for school or to go into business, the intercourse between them and the circle they leave must be continued, if at all, by the interchange of letters. These messengers are the shuttle that still weaves the fabric of family affection across whatever space may be between those who have parted. And curious as it may seem, sometimes a finer fabric is woven by letters than by personal association. The timid, the reticent, the self-contained, often express themselves more freely with the pen than with the tongue, and entrust to the sealed letter expressions they would hesitate to use if speaking. Many a boy and girl feel better acquainted with their father and mother after corresponding with them a year than if they had been for the time associated personally together. With others, absence from home sunders for the time all communication, and only memory keeps alive the flame of family affection. It is a great task for some people to write, a task they cannot easily bring themselves to perform. Hands at home with the hoe and the hammer, the axe and the trowel, the broom and the churn-handle, find the pen too slender a tool to be managed deftly, and the forming of sentences and the phrasing of ideas awkward work. But even with these habit and custom would make letter-writing easy.

What to write is the great question. To answer it, one needs to put himself into the place of the person to whom the letter is to be sent. When John is away from home, what is he most desirous of hearing about? What does Mary care most to know? Should they come home what would be the first questions they would ask with their eyes, their ears, their lips? We ask many questions with our ears that we do not choose to phrase in look or word; we wait to hear things said that are often of vital importance to us, but of which we would not speak for the world. If we can thus form an idea of what John wants to hear and what Mary is most interested to know, it is then easy enough to think what to write.

And when John and Mary write home what shall they say? Just what their parents are most solicitous to know about—their surroundings, their successes, their hopes, their disappointments, their friends, their observations and experiences. So can their parents know just how it is with them and keep exact reckoning of their latitude and longitude on the chart of life.

Those who have been away from home in early life know how cheering and stimulating are cheerful, sunny letters from home; letters assuring them of constant love and remembrance, and breathing an atmosphere of trust and confidence in the absent ones. They may know, some of them at least, how dark the world seems when their nearest friends appear cold, indifferent, and even doubtful of their good intentions. The world is a very frigid and dark place outside the home circle, and when a boy or girl goes astray, there is little danger that censure will not be quick to put a finger on the error. If in such an hour the home is found a place of refuge and forgiveness, and letters from home are winning and encouraging and persuasive, rather than severe and censorious, further error may be prevented. The love of God is the salvation of the world. The love of the parent is the salvation of the child.

Those who have children away from home know how eager every word they send back is scanned, how the letters are read and re-read, till the mood of the writer and his intellectual and moral tone are caught; how what is not said becomes equally significant with what is said, and the handwriting is made to tell all it can of the condition of the writer (and it can tell a good deal), and how when all that can be gleaned is gleaned, the parent longs for one look at the child to supplement the information in the letter, and assure himself that his child is all right. Boys and girls away from home cannot realize the tender solicitude which follows their every movement. Perhaps it is as well they cannot.

The more full and frequent are the letters that pass between home and its absent ones the more perfectly will the gulf of separation be bridged, and the less there will be to make up when the family circle is one again. The mother may so surround her absent son or daughter with her

presence with frequent letters that she shall seem to them to be always with them, and so they feel her constant protecting care, sustaining and comforting them and keeping them from the paths where temptations lie in ambush.

Regularity in family correspondence is extremely desirable, and a habit once formed of writing at certain stated times, no difficulty is found in keeping up the regular interchange of letters. Sunday afternoon or evening is perhaps as good a time as one can fix upon to converse with absent family friends. Letters of business are never written on the Sabbath by those who try to keep it holy, but letters between children and parents are certainly allowable, and of all days in the week the Sabbath is the one that naturally brings and keeps the family together. The absent child who writes regularly every Sunday to his parents and knows they are writing to him at the same time, will be reminded by that very fact of a great many things unspoken that will help keep him in the paths he has been trained to walk in, and shield him from the unkindness of the great world.

The proper preservation of family letters is very much neglected by many people. The letters as they come are tucked away in some drawer, or behind the looking glass, and not filed as they should be. Two pieces of pasteboard the size of commercial note, with an elastic band around them make a very good receptacle in which letters may be placed in the order of their dates as they are received. An old book cover answers the purpose also very well. Thus filed they occupy very little room, and one may be sure of finding them without search. Such a file is in the nature of a biography and become of inestimable value.

Family Circle.

NELLY'S MISTAKE.

A LOVE-STORY.

"Oh, I do not want my tea!" cried Nelly Manners, throwing herself into the depths of a large arm-chair. "Shopping is so exhausting on a hot afternoon like this."

So are some other things, thought her sister Marian, calling to mind with a little justifiable indignation the pile of cuffs and collars and laces now airing before the kitchen fire, and how often the initials N. E. M. had started up under her iron that hot afternoon. She often wondered whether Nelly ever gave a thought to the how and when of the getting-up of the delicate nick-nacks of lace that so charmingly became her. But it was only a passing vexation, banished the next moment.

"Now, I declare, here's Jack coming up the path!" cried Nelly with comical annoyance, as she poised a cup of tea on one hand under her nose, and contentedly inhaled the grateful perfume; "and I'd venture anything he wants us to go for a row, and then what'll become of the hat I wanted to trim this evening for to-morrow? Well, I can't go, that's certain. What a nuisance he is!"

"Here's a lovely evening for a row!" exclaimed the voice of the new-comer, even before his bodily form appeared. "Be quick, girls, and let us go off. It will be glorious on the river." Now Marian was as ardent a lover of the river as Jack himself, and it seemed to her, after her long afternoon's work, that the sweet, fresh breeze were the very thing she needed. Nelly, however, was quite decided.

"I am tired, Jack," she said promptly; "besides I want to trim a hat. We really can't go."

"I hate muddling about by myself," said Jack disconsolately; "and I felt so sure that you'd be delighted to come this evening."

"It will do you good, Marian," said her mother. "There is no reason why you should stay because Nelly does not care to go."

"I will come with you if you like, Jack," Marian said dubiously. She was sorry that Jack should lose the evening's recreation to which he doubtless had been looking forward all day.

"Thank you, Marian," he replied, grasping the idea that it was possible to go with one companion—which, until Mrs. Manners's suggestion, they had all lost sight of. It was so natural to make bright, pleasure-loving Nelly the centre of everything.

"We will get back early," Marian said to Nelly, noticing an anxious shade on her sister's face, which she quickly interpreted, "and I shall have time then to help you with your hat."

"You see, Jack, you would be as vexed as any one if I were to look a shabby fright at the picnic to-morrow—now, wouldn't you?" Nelly asked coaxingly, when Marian was up stairs.

"You see I am really pleasing you most by staying at home to-night."

Jack looked up repentantly. It gratified him to think that Nelly cared for his opinion, although he knew full well that she could not wear anything that would render her less bewitchingly fair in his eyes. He had known and been as a brother to these two girls ever since he had been a little fellow in petticoats, and Nelly an infant in her mother's arms. Lately he had watched, with a feeling almost of awe, how the child he had played with so many years was developing a beauty of form and feature that seemed to him to have no equal. Marian was a dear girl, always ready to do anything he wished, a perfect treasure of a sister; but Nelly, with her bright, sparkling beauty and vivacious manner, was a companion to be proud of indeed.

"Now, if that isn't exasperating!" Nelly exclaimed irritably, when, about twenty minutes after Jack and Marian had started, there came an ominously visitor-like knock at the door.

It was indeed a visitor, and a stranger, so Nelly must perforce put down her work and be entertaining. "Mr. Edward Archer" was a name that seemed quite familiar, yet Nelly was quite sure she had no recollection of the tall, aristocratic-looking man whom Susan presently ushered in.

"You will hardly remember me," he explained to Mrs. Manners, "for I was just a lad when I stayed in Bloxham with my cousin Jack, but I have very vivid recollections of Minnie and Nelly Manners. My cousin did not expect me till to-morrow morning, so, hearing that he was here, I ventured to follow him, hoping that, for his sake at any rate, I should not be considered an intruder."

Mrs. Manners hastened to assure her visitor that she was always pleased to see any of Jack's friends, and that his cousin must be sure of a welcome from her.

"So this is Nelly—little Nelly no longer, I perceive," he remarked, with a glance of decided approval at the fair face. "When I saw her last she was a little creature of eight, in pinafores and curls, and her sister a shy school-girl whom I am afraid Jack and I delighted to tease."

Nelly laughed heartily at this description of calm, self-possessed Marian. Very soon she and Edward Archer were chatting gaily, and by the time Jack and Marian returned, Nelly had quite forgotten her vexation in the pleasurable novelty of having this handsome, sprightly stranger to entertain.

The brunt of millinery fell on Marian's willing shoulders, and never had Nelly looked fairer than on the morning of the picnic, when her airy summer gown of some washing material was fitly completed and enhanced by her sister's deft handiwork.

So thought Jack; so thought Edward. Nelly was in a whirl of pleasurable excitement the livelong day, for her eyes were open to the fact that she was a centre of attraction, in a way they had never been until now.

A dangerous knowledge, especially to a bright, thoughtless girl of Nelly's tender years. Marian was conscious of a strange, undefinable feeling of distress as she noticed with what evident pleasure Nelly received the open admiration accorded her, and how delighted she was to display the homage of the handsome stranger, Jack's cousin. And Marian's quiet, observant eyes noted something else. She saw Jack's troubled gaze following Nelly's every moment, watching her eager, flushed face with an expression she had never seen there before; and her quick womanly instinct told her that to-day had revealed to Jack that for the future he would never be content with a sisterly regard from his favorite playmate and companion.

Nelly was indulging herself in a host of immensely pleasant reflections the next morning, when she received a brief note from Jack which did not at all chime in with them.

"Look here, Minnie," she cried with a scared expression, running into the kitchen, where her sister, in a large apron, was concocting a tempting salad. "What can the foolish fellow mean? Whatever shall I do? How can he be so stupid!"

"Are you sure you would like me to read it, dear?" Marian asked.

"Read it, Minnie, pray; and tell me what I can do. Oh, how foolish of him! I never should have thought it of Jack!"

"Why, Nelly?" Marian asked, quietly glancing down the letter.

"Why, he's nobody at all—at least, like that. It's too absurd. Papa might as well ask me to—marry him! It's utterly ridiculous."

Marian sighed for Jack's sake. She saw it was a hopeless case.

"Write kindly, Nelly dear," she said gently. "I am afraid it will be a great disappointment to him. He seems to be sure of your affection."

"Stupid fellow!" Nellie cried angrily. "I was fond of him—just as fond as a girl could be of her brother; and now it's all spoiled. I declare it's quite exasperating!"

"Think of him," Marian suggested quietly.

Nelly ran away to write her reply. Marian suggested several additions and excisions when she saw it, and succeeded in achieving a tolerably gentle expression of Nelly's decided refusal. That young lady, however, was of opinion that the letter was by no means crushing enough, so before she enclosed it in its cover she added a postscript:

"This is my unalterable decision. I shall never change my mind. Whatever could have put such an idea into your head?"

Poor Jack came no more to the Manners's pleasant house. Marian wondered very much how he was feeling over his mistake, but was far too delicate to seek his confidence, so she too held aloof. A week hence they heard that he had obtained a commission in the North, and had left Bloxham for an indefinite period.

Nelly was a little indignant that he should have gone off without saying "good-bye," but her mind was too occupied with certain other thoughts which were filling it just now for her to think very much about Jack or his concerns. Only tender-hearted Marian wondered how he was bearing the keen sorrow she knew he was feeling, and comprehended all the misery that was expressed in that sudden flight.

Edward Archer was paying a long visit to his relations, and seemed very naturally to have slipped into the familiar intercourse that Jack had so freely indulged in with the two girls. His admiration of Nelly was open and evident, he praised her pretty hair, her charming taste, her unflinching cheerfulness, with the utmost freedom. With Marian he was much less frank, yet he was always kind and attentive, and anxious for her to accompany them in all their expeditions—boating, croquet, or lawn-tennis. Even when his summer holiday was ended, and he had returned to town, Saturday and Sunday frequently saw him at Bloxham. Nelly guessed very well what brought him there, though he did declare that the boating there was irresistible, and an afternoon on the river was better than any amount of tonic.

One Saturday afternoon, late in the autumn, he called and found Nelly out.

"If we wait till she returns," he said to Marian, "we shall get no boating, as the afternoons are growing very short. Will you come at once?"

Marian hesitated.

"Nelly will not be in till tea time; if you are to go at all you must not wait for her," Mrs. Manners remarked, "and indeed, Marian, I think you require a little air; you have been staying in, dear child, with me all the week."

Marian was quite pleased to have the recreation, only a little perplexed that Edward should be so willing to start without Nelly. She was still more perplexed when, on reaching the river, Edward quietly remarked:

"Will you mind taking a walk along this lovely bank instead of having a row this afternoon?"

"Not at all," Marian replied unsuspectingly. "Perhaps you are feeling tired?"

"No, it is not that. A boat is not the most convenient place for conversation, and I want to talk to you, Marian."

"Is it about Nelly," thought Marian, warmed by something in his tone and manner; and somehow, gentle and unselfish

as she was, poor Marian shrank with an unaccountable dread from hearing the news that she felt was coming.

She was one of those girls to whom every one came with their confidences, never taking into consideration the possibility of her own feelings being enlisted in the trouble for which they claimed her sympathy. It had been so often before, and Marian had not shirked the pain thus inflicted, so now she put aside all thought of self, and prepared to hear Edward's story, and to aid him in any way that lay in her power.

They walked to some little distance in silence. Edward's usual nonchalant ease of manner seemed to have deserted him entirely. He looked anxious and distressed, started a conversation several times on some commonplace subject, and as abruptly quitted it, and finally drew up suddenly under a little clump of trees, and stood leaning against the low wall, gazing abstractedly into the river.

"I think I can guess what you want to tell me," Marian ventured to say presently, in pity for his evident distress, yet wondering why he should be so diffident. "It is about Nelly."

"Oh, no," he exclaimed hastily. "Whatever could make you think that, Marian? Did you imagine I had fallen in love with the pretty child?"

"Yes," she replied, and then her eyes fell before his, and in a moment she saw all her mistake.

"Marian, I love you: you think I am rash, but it seems to me ages since I first loved you. I could not wait to know my fate any longer. Tell me that I have not ruined my cause by my haste."

Who could have believed that quiet Marian, who all this time had cheerfully resigned to Nelly the attentions that her sister so naturally claimed, had known her mind perfectly well, and, in spite of her surprise, could give her lover her answer without a moment's hesitation.

"Mamma, look at Edward and Marian," Nelly cried sharply, peering through the deepening gloom at the two figures coming up the garden walk. "What can it mean?"

They came up to the open French window, against which Nelly and her mother were sitting. Their tale was soon told, but Nelly did not stop to hear it, she had fled from the room.

Marian found her lying all across the bed, in a perfect abandonment of agitation.

"Oh, Marian, how could you—how could you?" she sobbed out. "You have all agreed to deceive me. Who could have dreamt it of either of you?"

"My darling, I was afraid of this; you make me so unhappy," Marian cried, walking up and down the room in an agony of grief and remorse. "If only it could have come to you more gently! To think I should give you this pain! Oh, Nelly, you know I wouldn't willingly have done it for worlds."

"Why should I grudge you your happiness? I am sure you deserve it," Nelly cried with sudden generosity. "Don't mind me, Minnie dear, but oh! why did you let me be so deceived?"

Marian did not remind Nelly that she had deceived herself by exacting a continual attention that was given innocently enough—as to a child; nor would she remind her of poor Jack's fate, and the little concern she had ever felt for his pain, but Marian could not prevent a passing thought of these things.

In spite of Marian's constant manoeuvring to spare Nelly, the girl drooped, and lost her usual flow of spirits. Her mother, divining something of her malady, sent her away for the winter to a distant friend, where, removed from the observation of those who had known her from her childhood, she learned to bear the first real sorrow that had shadowed her young life.

In the following autumn, when Marian and Edward were married, Nelly had regained her bloom and energy. She could tease Edward in the most sisterly way, and had apparently recovered from the wound she had received, yet a keen observer could detect a difference in the girl's character. She was far less self-engrossed and exacting, and Marian, rejoicing over the additional attractiveness of her ever-attractive sister, longed for Jack to come home and try his fate again. For he had never been near them since, though they had heard of him from time to time, the last news being that he had gone to New York, entrusted with the charge of a branch of the business in which he was engaged.

Marian wondered if Nelly, as the years passed on, ever regretted her hasty decision. Other wooers came, but Nelly would have none of them, and indeed there were none that could compare with brave, honest Jack. She believed that he would have had a very different answer if Edward had not come in the way at that untoward moment—when Nelly had once allowed herself to realize the strangeness of exchanging Jack's brotherly regard for a dearer one. Marian perceived that the fact that Edward being a stranger, and so many years her senior, made Nelly like the importance of his fancied attentions, and that the girl's pride and self-love had been much more wounded than her heart. She even suspected sometimes that Nelly had discovered her mistake, and would never care for any one but Jack. Why did he not come? Could he have forgotten his old love? If Marian could only know about that, she would have written to tell him all her surmises, but it was too delicate a matter to interfere in. His parents had removed to another town. He had never written, and she knew nothing, so she could only lament in silence that Nelly should be denied the happiness that was her own lot.

Six years had changed Nelly into a woman, quiet and subdued in comparison with what she had been as a girl, but still boasting of no ordinary beauty. She was not so changed, however, that the occupant of a small boat, lazily plying his oars one summer evening, recognized her as she stood waiting at the water's edge for the ferry-boat.

He lay dubiously on his oars, hesitating what to do. The old wherry had not yet put out from the other side, its owner having apparently gone on shore for some refreshment. With sudden determination he rowed briskly up to the bank, and drawing up his boat, asked whether she would allow him to take her across.

She started at the sound of the voice, glanced inquiringly at the bronzed face, and then exclaimed—

"Why, Jack?"

"Yes, Nelly; am I so altered?"

"No, scarcely at all; only I thought you were in New York."

She stepped into the boat, he grasped the oars without any further remark, and away shot the light boat into mid-stream.

Neither spoke, yet each heart was in a tumult of wonder, and doubt, and apprehension. The silence became oppressive. Nelly felt it must be broken, so she rushed into commonplace observations.

"Isn't our river lovely just here? I have never seen anything prettier."

"Nor I," Jack responded. "The American rivers are quite a different thing—inmeasurably grander and more imposing, but nothing like this for peaceful beauty. They could never give one the homeful feeling that this has."

"Do you see this plant?" Nelly asked, leaning over the boat, and plucking a sprig of tall, graceful foliage that stood up out of the placid water. "It is very rare, I think; I have never seen it in any other part of the river, and even here you see it very seldom. It is so lovely when in bloom. This is not. What a pity!"

"There is some over there, I think. Shall we go over and see? Allow me to look at it. I don't remember having ever noticed it before."

Nelly handed him the little sprig. He took it from her, and examined it carefully, as if it were a matter of vital importance. Their eyes met for a moment, and Nelly continued the conversation vigorously. Oh, what hypocrites, to be discussing thus earnestly a bit of paltry river-weed, when each heart was full of such widely different thoughts!

"It was only the sun on the leaves; I thought it was a blossom," Nelly said, earnestly examining the plant to which Jack had rowed up.

"It is very pleasant out here this evening," Jack remarked presently. "Would you like to stay out a little while?"

"Thank you; I think I must go home," Nelly replied, feeling she could not endure much more of this kind of thing.

So Jack handed her out, and held her trembling fingers for a moment in his, then he drew his boat up into the house, donned hat and coat, and prepared to accompany her, though he was angry at his own weakness in scorching himself in this way. He saw so plainly before his eyes those words impatiently dashed two or three times underneath: "This is my unalterable decision. I can never change my mind."

He was presently thinking that he had been a fool to come. The effort to appear natural and unconstrained was too much for both. It was a relief to reach the garden gate, and bid each other good night.

And yet good night could not so easily be said, for it meant good-bye; and Jack felt that this time must be final. No more coming back to rake up the ashes of dead hopes; and instead of good night, he could only cry out, in a voice of suppressed pain—

"Nelly!"

She was not the old Nelly—she could feel for his pain, and be gentle with him—she could be sorry for what he had suffered for her sake all these years, and hate herself for her cruel thoughtlessness of long ago.

"Jack, forgive me!" she said humbly, "I made a great mistake."

The underlined words vanished in a moment.

"Nelly, my love!" he exclaimed, "when did you find that out?"

"Oh, years ago," she replied, a little wearily.

"Poor little Nelly!" he said, remorsefully, without a thought of his own past pain. "Oh, those wasted years! How selfish I have been!"

"Don't reproach me like that, Jack," Nelly cried imploringly. "And I hope the years have not been wasted. I was a very worthless Nelly then. I think I am better now."

"The best of now, the dearest little Nelly in the whole world," was Jack's reply.

Minnie May's Department.

MY DEAR NIECES.—My last letter described a trip down the Saguenay River, a part of the journey taken by the press excursionists this season. Now I begin with our oldest Canadian city, Quebec, rendered doubly interesting by the historic and legendary associations investing it. Thus a visitor is not only entranced by the loveliness of the scenery, but his imagination is also kindled, and his sympathies are aroused by a contemplation of the scenes which have occurred there, for the memory of heroic lives sacrificed on its hallowed ground will endure forever. From Champlain's time, 1608, here has been the centre of French life and influence in America. Till Montcalm fell gloriously, a long line of French governors ruled proudly from the old castled rock. Then the lilies of France gave away to the cross of St. George, which has waved ever since over a people French in blood and sentiment, but who, in every hour of need, prove their loyalty to the British throne. Quebec is certainly a very peculiar place. A military town most compactly and permanently built, environed as to its most important parts by walls and gates founded upon a rock, and in its highest parts, overlooking a great extent of country, between three and four hundred miles from the ocean; yet, in its river, showing all the bustle of a crowded seaport; its streets narrow and winding, up and down, almost mountainous declivities—it is easy for the alert to lose his way in Quebec. We landed there Friday night. In honor of the visiting journalists, a grand display of bunting and flags, with expressions of welcome in both languages, was strewn across the streets and stores. Our festivities and sight-seeing were not to commence until the following day, but that evening I walked over Dufferin Terrace; this promenade is about a quarter of a mile long; and thither flock in the evening the beauty and fashion of the old capital. Being at an elevation of over two hundred feet, a beautiful panorama stretched beneath us—the river St. Lawrence, bearing on its

bosom hundreds of vessels of every description; the Lower Town, with its lamps, lay, like a nether firmament, far beneath us, whilst Point Levis glittered and sparkled on the thither shore. At the foot of the cliff runs Champlain street, through which Montgomery endeavored to lead an attack on the city, in 1775, but met his death at a place close by, now marked by a wooden sign with the inscription, "Here Montgomery fell." For Saturday our Quebec friends had arranged a grand programme. In the morning we visited Laval University and received a very cordial reception from the professors, who accompanied us through the library, museum and gallery of paintings. The chapel contains the best collection of paintings (by eminent masters of the French school) in this country. The library contains upwards of nine thousand volumes, and there is a valuable collection of philosophical instruments, besides fossils, minerals, Indian curiosities, etc. From there we went to Dufferin Terrace, where an official reception on behalf of the city was held, with addresses; after which we proceeded to the citadel, where we were received most graciously and kindly by the Marquis of Lorne and H. R. H. Princess Louise, their Excellencies shaking hands and chatting briefly with each member of the party. After taking a glance through the different apartments in the citadel and the armory, we entered the carriages in waiting, each of which contained a resident of Quebec. Mr. Brunelle, of the Quebec fire department, occupied a seat in our carriage; he was exceedingly kind in describing and pointing out all places of interest as we drove out to Beauport Asylum and the Montmorency Falls. The route lay over a smooth, hard highway between pretty country houses, with their neat and clean doorsteps and garden walks, and from the open doors we could see the dimmers frying on the great stoves set into the partition walls of each cleanly home—while Quebec appeared, to a backward glance, like a wondrous painted scene, with the spires and lofty roofs of the Upper Town, and the long, irregular wall wandering on the verge of the cliff, and the thronging gables and chimneys of St. Roch, and many spires and convent walls. The Montmorency Falls, which are situated in a beautiful nook of the river, astonished us all with their grandeur; they are higher than those of Niagara, being 250 feet high, but they are very narrow. On returning we visited Beauport Asylum, which contains 900 inmates, and were afforded the privilege of inspecting the several departments of this well kept institution. Upon our return to the city, the very efficient fire brigade of Quebec turned out in response to an alarm and gave a good exhibition. In the evening a civic dinner was given in the hotel, at which about 235 guests participated.

The next day being Sunday, we were at liberty to do what we pleased. An invitation was extended to the Ontario and Quebec journalists to attend mass in the Basilica (the French cathedral). Seats were provided in the chancel for the visitors, who numbered about sixty. Mr. Le Vasseur conducted the musical portion of the mass, one of Gower's, which was admirably rendered. The marching orders for Monday morning were: "Depot of Quebec and Lake St. John Railway at 8 o'clock, sharp," to take the train for St. Raymond, a distance of 60 miles south from Quebec. At that hour the entire party mustered. The weather was splendid, the route selected for the trip a very fascinating one—the principal places of interest being the Jacques Cartier River, St. Anne, Lake St. Joseph, and St. Raymond; at the latter place carriages were waiting to convey the party through the village to give the visitors a glimpse of the beautiful adjoining country. On returning from the trip on the Lake St. John Railway, we went aboard one of the ferry-boats and were taken round the new harbor works by the commissioners, the details being explained by Mr. Pilkington, the chief engineer. Proceeding thence across the river, a halt was made to give the visitors an opportunity of viewing the new gravestone at St. Joseph de Levis. Our time was now up for leaving Quebec. So, after expressing satisfaction and gratitude for the handsome manner in which we had been received and entertained, we bid adieu to most of our Quebec friends, and embarked on the Montreal steamer at five o'clock on the homeward trip. The evening on board was spent very pleasantly. A number of the Quebec Press accompanied us as far as Three Rivers, and added materially to the amusements. An impromptu concert was organized and carried out, several ladies and gentlemen contributing to

the programme; and Mr. J. W. Bengough, of Grip, gave the party much amusement by his comical cartoons of some of the leading representatives of the press. We landed in Montreal about 8 o'clock next morning. We proceeded immediately to the Windsor for breakfast, and being guests for the day of the Montreal Pressmen, carriages were in waiting to convey us through the principal streets, the leading establishments being pointed out to us as we passed. We visited the Hudon cotton factory, and the Kennels of the Montreal Hunt, a large and very wealthy institution, where we were courteously received and kindly shown through their interesting premises. We next visited the steamer Polynesian of the Allan Line, which was decorated in our honor. A sumptuous lunch was given, after which the President proposed a toast to Captain Brown, which was duly honored. In fact, a series of receptions and overflowing hospitalities awaited the party everywhere. We now proceeded to the steamer Berthier, where our brethren of the Montreal press, the Mayor and Council of that city dined and wined us, with a prodigal bounty such as I have never seen excelled in all my experience. The tables on board the steamer Berthier were so beautifully and perfectly arranged! One little hint I might give you, my dear girls. A beautiful centre piece on each table was a piece of ice about two feet square, cut quite even, and each side almost covered with maiden hair fern; it was set in some bowl or crock to hold the water, and the bottom literally covered with ferns. It looked very pretty. I have now taken you, mentally, through the details of a trip, perhaps monotonous to you, but most entertaining to me, as well, I am sure, to all who were fortunate enough to be participants. To all those who so kindly, and often at a sacrifice, contributed to our pleasure, the Press Associations of Quebec and Montreal, and to the railway companies, the FARMER'S ADVOCATE, through Minnie May, extends its warmest thanks, with the hope that the pleasant acquaintances formed may be renewed on just as auspicious an occasion.

Answers To Correspondents.

GERTY HECKETT.—Five years—"Wooden Wedding."
 Ten years—"Tin Wedding."
 Fifteen years—"Crystal Wedding."
 Twenty years—"Linen Wedding."
 Twenty-five years—"Silver Wedding."
 Fifty years—"Golden Wedding."
 Sixty years—"Pearl Wedding."
 Seventy-five years—"Diamond Wedding."
 SIGMA-1. The use of bridesmaids at weddings appears to be as old as the times of the Anglo-Saxons, among whom, "the bride was led by a matron, who was called the bride's woman, followed by a company of young maidens, who were called the bride's maids. In later times it was among the officers of the bridesmaids to lead the bridegroom to church, as it was that of the groomsmen to conduct the bride thither. Part of the duties of the bridesmaids consisted in dressing and undressing the bride, and the bridegroom's men performed the same offices to the bridegroom. 2. Bridesmaids, as mere ceremonious attendants at marriages, are still in use in England, but the bridegroom is usually attended only by one confidential friend. Various derivations have been given of the words "bride" and "bridegroom"; but there seems little doubt that "bride" is the past participle of the Anglo-Saxon verb "bredan," to nourish or cherish, and that groom is the past participle of "gyman," to take care of, guard, or attend, so that the bride is the woman nourished and cherished, and the bridegroom is the one by whom she is attended, served and protected. 3. The bridegroom occupies the last carriage, with the principal groomsmen. He stands facing the altar with the bride at his left hand.

EDITH.—We know nothing better for promoting the growth of the hair than a mixture of bitter apple (Colocynth) and rum, take 1/2 oz bitter apple, and 1/2 pt. of Jamaica rum, put it together and let it simmer on the back of the range two or three days, then strain it and apply to the roots of the hair two or three times a week. Another good preparation for the hair is: Take 1 oz of sulphur, put in a pitcher and pour 1 qt. of boiling water upon it, let it remain for 48 hours, only stirring occasionally, then apply to the hair.

ETHEL MAY.—Rub a little gin on the face when going to bed at night, and wash it off in the morning, or lemon can be used in the same manner, and it will help to make the skin fine. 2. Margaret,

a pearl; Laura, crowned with laurel; Kate, spotless, pure; Bertha, the shining one; Ann, grace. 3. Tube rose, dangerous pleasure; Peruvian heliotrope, I love you; myrtle, love; oats, music. Tom.—The green-eyed monster is a common personification of jealousy. O, beware, my lord, of jealousy, It is the green-eyed monster which doth make The meat it feeds on.—Shak. Land o'cakes is a name sometimes given to Scotland, because oatmeal cakes are a common national dish, particularly among the poorer classes.

Old Customs.

Old customs! Well, our children say We get along without them; But you and I, dear, in our day Had other thoughts about them. The dear old habits of the past— I can not choose but love them, And sigh to think the world at last Has soared so far above them.

We had not, in the years gone by, The grace that art discovers; Our lives were calmer; you and I Were very simple lovers. And when, our daily duties o'er, We strayed beside the rushes, The only gems you ever wore Were bright and blooming blushes.

Our rustic way was slow, but yet Some good there was about it, And many ills we now regret Old habits would have routed. I know our children still can see The fifth commandment's beauty— May they obey, as we once did, From love, and not from duty.

The world to-day is far too high In wisdom to confess them, But well we know, dear, you and I, For what we have to bless them, Though love was in the heart of each, I trembled to accost you; Had you required a polished speech I think I would have lost you.

No doubt our minds are slow to gauge The ways we are not heeding; But here upon our memory's page Is very simple reading. It says the forms we still hold fast Were wise as well as pleasant— The good old customs of the past Have leavened all the present.

Ruskin's Way of Courting.

When a youth is fully in love with a girl, and feels that he is wise in loving her, he should at once tell her so plainly, and take his chance bravely with other suitors. No lover should have the insolence to think of being accepted at once, nor should any girl have the cruelty to refuse at once without severe reasons. If she simply does not like him she may send him away for seven years or so—he vowing to live on cresses and wear sackcloth meanwhile, or the like penance; if she likes him a little, or thinks she might come to like him in time, she may let him stay near her, putting him away on sharp trial to see what stuff he is made of, and requiring, figuratively, as many lion skins or giants' heads as she thinks herself worth. The whole meaning of true courtship is probation, and it ought not to be shorter than three years at least; seven is to my mind the orthodox time. And these relations between the young people should be openly and simply known, not to their friends only, but to everybody who has the least interest in them, and a girl worth anything ought always to have half a dozen or so suitors under love for her. There are no words strong enough to express the general danger and degradation of the manners of mob-courtship, as distinct from those which have become the fashion—almost the law—in modern times; when in a miserable confusion of candlelight, moonlight and limelight—and anything but daylight—in indecently attractive and insanely expensive dresses, in snatched moments, in hidden corners, in accidental impulses and dismal ignorances, young people smirk and ogle and whisper and whimper and sneak and stumble and flutter and fumble and blunder into what they call love—expect to get whatever they like the moment they fancy it, and are continually in the danger of losing all the honor of life for a folly and all the joy of it by an accident.

Kitchen Progress.

Even in the kitchen inventive genius has gained a strong foothold, entirely usurping the primitive methods practiced by our grandmothers in the performance of their domestic duties. Mechanical contrivances of all kinds supply what in former years required deftness. Griddles themselves do the cake turning. Eggs are beaten by a crank; the coffee bean is not only roasted and ground by machinery, but the drink made by a clever contrivance that considerably whistles when the beverage is done! A child, now-a-days, may successfully fry Saratoga potatoes. An open work basket is set in a pan of fat, with the article to be fried in it. The pan is furnished with a high handle with a hook in the middle. The instant the thing to be cooked has assumed the delicate brown appropriate to viands cooked in this way, the basket is lifted and hung upon the hook to drip and dry. There is no marring of the symmetry of outline of the fragile delicacies, no spattering of grease in the endeavor to fish them out, and there are no last ones to burn while waiting their turn to be taken out. Then the new broiler, which permits the article to be tightly shut in, obviating all danger of depositing it upon the floor or in the fire, but catches every drop of juice that may exude. When the broiler is turned over, the juices are thrown back upon the meat, which thus bastes itself. To those unsuccessful ones who have not yet arrived at the solution of the problem of how to cook a chop over a quick fire without burning the fat, these broilers will bring success and relief from their perplexities. Those fond of nicely shaped griddle cakes, will rejoice over a griddle made with a hinge in the middle. One side has a number of circular depressions into which the batter is dropped. When the cakes are done on the under side, the griddle is simply folded over on itself, which deposits them on the other side on the opposite half of the griddle, leaving the empty places ready for more. Then there are ironing boards covered and ready for use, and the various articles, light and serviceable and unbreakable, like buckets and basins and foot-tubs, made of papier mache. In consequence of these improvements housework need no longer be dreaded by the unskillful.

Sunlit Rooms.

No articles of furniture should be put in a room that will not stand sunlight, for every room in a dwelling should have the windows so arranged that some time during the day a flood of sunlight will force itself into the apartment. The importance of admitting the light of the sun freely to all parts of our dwellings cannot be too highly estimated. Indeed, perfect health is nearly as much dependent on pure sunlight as it is on pure air. Sunlight should never be excluded except when so bright as to be uncomfortable to the eyes. And daily walks should be taken in bright sunshine. A sun-bath is of more importance in preserving a healthful condition of the body than is generally understood. A sun-bath costs nothing, and that is a misfortune, for people are deluded with the idea that those things only can be good or useful which cost money. But remember that pure water, fresh air, sunlit homes kept free from dampness, will secure you from many heavy bills of doctors, and give you health and vigor which no money can procure. It is a well-established fact that the people who live much in the sun are usually stronger and more healthy than those whose occupations deprive them of sunlight. And certainly there is nothing strange in the result, since the same law applies with equal force to nearly every animate thing in nature. It is quite easy to arrange an isolated dwelling so that every room may be filled with sunlight some time in the day, and it is possible that many town houses could be so built as to admit more light than they now receive.

2 lovers sat beneath the shade,
 And 1 un2 the other said:
 "How 14-8 that you be9
 Have smiled upon this suit of mine:
 If 5 a heart it palps 4 U—
 Thy voice is music melody—
 'Tis 4,2 be thy loved 1, 2—
 Say O nymph, wilt marry me?"
 Then lisped she soft, "Why, 13ly."

Why is a man sweeping a crossing like the girl that has just gone over it? Because one sweeps a crossing, and the other crosses a sweeping.

Recipes.

A BLACK CHIP HAT.—To renovate a black chip hat, add to one pint of cold water a teaspoonful of spirits of ammonia; use with a soft brush (a nail or tooth brush will answer the purpose), and when well cleaned, rinse with cold water and place in the sun to dry. Do not soak or scrub sufficiently to destroy the shape. It will look like new.

GINGER CAKE.—Good—keep a long time. 1 cup brown sugar, 1 cup Orleans molasses, 1 cup sour milk, $\frac{3}{4}$ cup lard and butter mixed, 3 cups flour, heaped full, 2 eggs, 2 teaspoonfuls soda dissolved in warm water, 2 teaspoonfuls cinnamon, 2 teaspoonfuls ginger, salt to taste. Bake in moderate oven. Bake in 2 deep pans.

FRENCH PICKLES.—100 cucumbers moderate size, washed and laid in a jar, cover with water, turn the water off in kettle, add 1 pint of salt, boil up and skim, turn over cucumbers, let stand 48 hours, rinse in cold water and drain, sprinkle on mustard, peppers, horse radish; pour on vinegar, scalding hot. They are splendid.

CITRON PRESERVES.—Pare, core and slice, or cut in fancy shapes. For six pounds of citron use six pounds of sugar, four lemons, one fourth pound of ginger root. Boil the slices in a granite ware kettle, in a little clear water, for half an hour, or until they look clear; then drain them. Save the water, and put the slices into another dish with a little cold water; cover them, and let them stand over night; in the morning bruise the ginger root, wrap it in a thin muslin cloth, boil in three pints of clear water till the strength is boiled out of it, remove the root, put in the sugar, and when it is melted place over the fire, boil and skim. Put in the citron and the juice of the lemons. Boil them till the citron is transparent. Put into cans or jars and pour the syrup over them.

Cleaning Carpets.

In all our own experiments we have found nothing so safe and serviceable as bran slightly moistened—only very slightly—just sufficient to hold the particles together. In this case it is not necessary to stop and clean the broom every few minutes. Sweeping the carpet after the bran has been sprinkled over it not only cleans the carpet and gathers all the dirt into the bran, but keeps the broom clean at the same time. If too much dampened, aside from injuring the carpet it makes the work harder, because the bran becomes very heavy if very damp. The bran should be sifted evenly over the floor, and then the room swept as usual. The bran scours and cleanses the whole fabric, very little dust is made while sweeping with it, and scarcely any settles on furniture, pictures, etc., after the work is accomplished, because every particle of dirt, thread, bits of paper or lint is gathered up into the mass of bran that is being moved over the floor, and so thoroughly incorporated with it that it will not be easily separated. Carpets swept in this way retain very little dust, as will be plainly demonstrated whenever they are taken up to be shaken.—[Domestic Monthly.]

A Shelf Lambrequin.

If you have a rough, uncouth shelf in your kitchen or sitting-room, first cover the top neatly with some dark, smooth cloth; then take a strip of dark but bright double-faced Canton flannel about eight inches in depth (more or less, according to length and width of shelf), and long enough to reach across the front of the shelf and around at either end; paste a pretty, contrasting stripe of cretonne through the centre, and stitch it on with the machine; hem the lower edge of the flannel, and finish with as pretty a worsted fringe as you can afford; bring the upper edge up over the edge of the board and make fast with minute iron tacks, and you will have not only a convenient receptacle for lamps, books, or vases of flowers, but an addition to the furnishing of your room in the shape of a very artistic and eye pleasing shelf.

Seminarian (who has an asthmatic dog at home) is calling on young lady. As a suspicious sound issues from an adjoining apartment, he remarks: "How homelike it seems to hear the old dog snore?" A few moments later the young lady observed that "Papa seems to be sound asleep in the other room."



—Lady's Basque. The pattern of this garment is cut in five sizes, 32, 34, 36, 38 and 40 inches bust measure. $3\frac{1}{4}$ yards material, 24 inches wide, and 18 buttons for medium size.

—Lady's Overskirt. The pattern of this garment is cut in five sizes, 22, 24, 26, 28 and 30 inches waist measure. Five yards material, 24 inches wide, for medium size.



—Lady's Mantle. The pattern of this garment is cut in three sizes, 34, 36 and 38 inches bust measure. $4\frac{1}{2}$ yards material, 24 inches wide, 7 yards fringe, and 16 buttons for medium size.

The Fashions.

Red dresses are very much worn for young ladies and misses, and for fall wear, a dark red cashmere dress, trimmed with darker red velvet, and a red straw or felt hat also trimmed with velvet, is a very stylish costume for either blonde or brunette. With many dresses plush or velvet basques are worn, which give a very rich appearance; with costumes of this kind the little French bonnets are adopted; they have covering of velvet or plush and are trimmed with dark China asters or crimson roses, or some have merely a buckle in the front, and tied with narrow strings under the ear. A very pretty costume seen not long ago, was made of dark blue cloth; the skirt was pleated from the waist down, the pleats being lined with dark red. The waist was made of a jacket of blue, and a vest of red, the corsage being ornamented with military braid. The mantles are most fashionable, as shown in the accompanying engraving; they are made close fitting in the back, and a large satin sash is set just below the narrow curve at the waist.

I Dinna Ken what has Come O'er Me.

"I dinna ken what has come o'er me,
The days are sae wearifu' lang;
The glory is out o' the sunshine,
The lift is out o' my sand.
The wark that used to go wi' me
Is done wi' a sigh and a tear;
My heart, that was light as a linnets',
Is heavy wi' many a fear.

"The dew on the bonnie gowan,
The 'loo!' o' the milking kye,
The making o' cheese and butter,
Who like them better than I?
The wark o' the day was easy,
For the gloaming walk before me,
But since I am out wi' Robin,
I dinna ken what has come o'er me."

"I dinna ken what has come o'er me,"
Said Robin, sowing the wheat;
"I used to think o' things bonnie,
And living and warking was sweet;
The wark o' the farm went wi' me,
My heart was merry and light;
I think I will e'en to the dairy,
And speer after Jenny to-night."

"Oh, Robin! oh, Robin! How could ye?"
"Oh, Jenny, you're dearest and best!"
He held out his hands and she took them,
Then syne she was clasped to his breast.
O, then, but the meadow was sweet!
The milking was easy and glad!
And home through the gloaming they went,
The happiest lassie and lad.

Now Jenny sings in her dairy,
And light is the sound of her feet;
While Robin merrily whistles,
Busily sowing the wheat.
The work in the house is easy,
The work in the field is light;
For when love in the heart is true,
The work of the hand goes right.
—Lillie E. Barr, in N. Y. Ledger.

Do not speak of your happiness to a man less fortunate than yourself.—[Plutarch.]

The world is satisfied with words; few care to dive beneath the surface.—[Pascal.]

We do love beauty at first sight; and we do cease to love it if it is not accompanied by amiable qualities.

We ought not to look back unless it is to derive useful lessons from past errors and for the purpose of profiting by dear-bought experience.—[George Washington.]

If a great thing can be done at all, it can be done easily. But it is that kind of ease with which a tree blossoms after long years of gathering strength.—[Ruskin.]

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES.—So here's October come again—another pleasant year almost gone by! Dear, dear, how the time flies in cheerful company! All of you who are competing for the prizes will have to look sharp, as the time will soon come when I must decide who the lucky ones are for 1883. I have kept an accurate account of everything sent in, number of puzzles and answers, and the best of each. I did not hear from as many of you as usual this month; how is that? Suppose it is nutting time, and, of course, boys and girls will go prowling around anywhere and everywhere to find such treasures as walnuts, hickory nuts, chestnuts, and all the rest, and forget all about their poor old Uncle Tom. Then others tell me that school has begun, and they have so many hard lessons to learn that they scarcely get time to study. Well, I am glad to know that so many of my children have returned to school. I want you all to become good and clever men and women, so that in after years you may be fit for any position in society; and a girl who wishes to acquire a permanent charm of conversation, which a clever, cultivated woman may so abundantly possess, should carefully avoid slang words and phrases. Slang phrases constantly present themselves as the easiest and most obvious thing to say about people, or places, or books, when it takes a little mental effort to describe them more accurately. It is not necessary to speak good English; you must be elaborate or stiff. The very best and most vigorous English is made up of short, simple words and natural expression. And, boys, you are the architects of your own fortunes; take for your motto self-reliance, honesty and industry. Don't drink, smoke, swear, deceive, steal or tattle. Be polite and generous, read good books, be kind to your school-mates and love your sisters, and always ask them to join you in all your sports. UNCLE TOM.

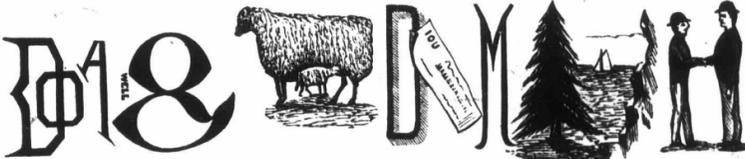
PUZZLES.

- 1.—TRANSPOSITION. Het odog rae retbet deam yb lil, Sa roouds hrscude rea tewserc lsilt. MAGGIE ELLIOTT.
2.—DECAPITATION. Whole, I am a fire-place; behead, and I mean to value; behead again, and I am a verb; trans- pose again, and I am a verb; behead, and I am a preposition; curtail, and I am an article. HARRY A. WOODWORTH.
3.—CHARADE. My first is an article of diet; my second is a drinking; my whole is a flower. HARRY A. WOODWORTH.
4.—Subtract forty-five from forty-five so as to leave forty-five. SARAH BRETT.
5.—ENIGMA. My first is in lad, but not in boy. My second is in dad, but not in toy. My third is in never, but not in leather. My fourth is in so l, but not in sever. My fifth is in cat, but not in mice. My sixth is in Ayr, but not in Nice. My seventh is in skate, but not in ice. My eighth is in eel, and also in advocate. My whole you will find in the ADVOCATE. AGNES MAUD CALDERWOOD.
6.—ENIGMA. I am composed of seven letters. My 2, 3, 4 is a pronoun. My 6, 7, 5 is to permit. My 4, 3, 1 is a posture. My 2, 3, 1 is to strike. My 3, 4 is a conjugation of the verb to be. My 6, 3, 4, 4 is to hearken. My 4, 7, 5 is to place. My whole a weed which is a great nuisance to farmers. MAGGIE ELLIOTT.

- 7.—ENIGMA. My first is a female, My second is a female, too; My whole is still a female, Though, perhaps, it may be you. MAGGIE ELLIOTT.
8.—DROP-LETTER. W-e-t-e-a-'s-w-y-h-m-c-w-l-p-a-. HARRY A. WOODWORTH
Answers to September Puzzles.
1.—"Honor and fame from no condition rise; act well your part, there all the honor lies."
2.—Onion.
3.— D RED RACER DECIMAL DEMON RAN L
4.—But foolish mortals still pursue False happiness in place of true; A happiness we toil to find, Which still pursues us like the wind.
5.—Them, hem, me, crib, rib.
6.—Petra, Aden.
7.—Mulberry.

Names of those who have sent Correct Answers to September Puzzles.

S. E. Miller, Thomas Doolittle, Addie V. Morse, Agnes Maud Calderwood, Maud Dennee, Jas A. Flagg, R. Wilson, Estella J. McLean, Selena Alexander, Fanny Burton, George W. Finnermor, Esther Louisa Ryan, Sarah Brett Robt. J. Rick, Frank Booth, Jennie Phoenix, Jas. Watson, Nellie J. Clark, Richard Kingston, Maggie Elliott, P. Boulton, Harry A. Woodworth, H. Armstrong, John Wm. Forbes, Ella Montgomery, Gussie Henderson, Tom Hartley, Frank Jarvis, Mary Taylor,



9.—ILLUSTRATED REBUS.

Katie G. Moyer. Boys Will be Boys. An exchange says a boy will tramp two hundred and forty miles in one day on a rabbit hunt and be limber in the evening; when, if you ask him to cross the street and borrow Jones' two inch augur, he will be as stiff as a meat block. To be sure he will. And he will go swimming all day and stay in the water three hours at a time, and splash and dive, and paddle and puff, and next morning he will feel that unmeasured insult has been offered him when he is told by his mother to wash his face. And he'll wander around a dry creek bed all the evening piling up a pebble fort, and nearly die off when his big sister wants him to please pick up a basket of chips for the parlor stove. And he'll spend the biggest part of his time in trying to corner a stray mule or bare-backed horse for a ride, and feel that all life's charms have fled when it comes his turn to drive the cows home. And he'll turn a ten acre lot upside down for ten inches of angle worms, and wish for the voiceless tomb when the garden demands attention. But all the same, when you want a friend who will stand by you, and sympathize with you, and be true to you in all kinds of weather, enlist one of these same boys. "Did I ever tell you about Pinch, the shoemaker?" asked Fogg. "No? Well, he got shut into a little, dark closet in his shop—spring-lock, you know—no air—couldn't live long, you know. The boys heard of it—rushed in—pried open the door: but, alas! poor man—" "Was he dead?" cried a half-dozen men. "No not dead, but he was breathing his last—that is to say, he had it with him." The fellows felt like booting Fogg; but as he is a strapping fellow, they awl kept still. He'll get a welt one of these days. Fellows don't like to be soled that way.

Boys and Girls, Attention!

At least 5,000 Boys and Girls, that is, at least one for every Post Office in the Dominion, can make themselves happy this fall or winter, in the free receipt of one or more of the very desirable things described in our Grand Premium List. They can easily gather 3, 4 or 5 subscribers, or more. Many persons who would turn older people away, will oblige a Boy or Girl by subscribing, when working for some premium. Those too young to write, can get some one to send the names on for them. To solicit subscribers is a good exercise to develop business talent. Many parents encourage their children in such a work. At least one boy or girl at every post office ought to collect enough subscribers to get mother or father a holiday present. Send for Illustrated Premium List, &c. You will find many fine things for presents described. Go right to work this month. TRY IT. (Try it as the spider did, with a will.)

Off the Line.

The boys stood up in the reading class, A dozen or so—and each one said That those at the foot should never pass, Or find it easy to get up head. Harry was studious; so were Jake, Jim, and Robert, and Tom, and Jack; For men of business they meant to make, And it wouldn't do to be dull or slack. There wasn't another boy on the line, More anxious than Jimmy to keep his place; For to be at the head was very fine, But to go down foot was a sad disgrace. But Jim delighted in games of ball, Polo, tennis, or tame croquet And his mind was not on his books at all When he took his place in the class that day.

'Twas his turn to read, and he started off With an air attentive—a vain pretence; For the boys around him began to cough And mudge and chuckle at Jim's expense.

"You've skipped a line," whispered generous Ben Who often had helped in this way before,

"You've skipped a line!" shouted Jim; and then Of course the school-room was in a roar.

As down to the foot Jim went that day He learned a lesson that any dunce Might have known; for we're sure to stray If we try to be in two places at once.

Sport, when you sport, in an earnest way, With a merry heart and a cheerful face; But when at your books think not of your play, Or else you'll certainly lose your place. —Josephine Pollard, in Harper's Young People.

The Kingdom of Home.

Dark is the night and fitful and drearily Rushes the wind, like the waves of the sea. Little care I, as here I sing cheerily, Wife at my side and babe on my knee, King, king, crown me the king, Home is the kingdom and love is the king.

Flashes the firelight upon the dear faces, Dearer and dearer as onward they go, Forces the shadow behind us and places. Brightness around us with warmth in the glow, King, king, crown me the king, Home is the kingdom and love is the king.

Flashes the firelight, increasing the glory, Beaming from bright eyes with warmth of the soul, Telling of trust and content, the sweet story, Lifting the shadows that over us roll. King, king, crown me the king, Home is the kingdom and love is the king.

Richer than miser with perishing treasure, Served with a service no conquest could bring, Happy with fortune that words cannot measure, Light hearted I on the hearthstone can sing. King, king, crown me the king, Home is the kingdom and love is the king.

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1 plant Downing's Ever-bearing Mulberry; something new. Try a few.

1 plant of "Prince of Berries," the latest strawberry plant See future Nos. of Farmer's Advocate.

2 plants of the dwarf Juneberry. These plants should be in every garden. The plant is very hardy. The fruit ripens early, and in enormous quantities.

2 plants of "Jersey Queen" strawberry; the plant for flavor, &c.

3 plants "James Vick" strawberry; turned out magnificently this year; or

4 plants "Russian Mulberry"; still doing well.

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The Farmer's Hand Book for 1884, containing Calendar, Moon's changes, Diary of Farm Accounts, of Produce, Live Stock, Dairy and Farm labor, with Breeding Register and a most useful

collection of Tables, Recipes, with memoranda pages, &c., for the farmers, not found in any other single book.

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360 Richmond St., LONDON, ONT.

SEND FOR OUR GRAND ILLUSTRATED PREMIUM LIST.

Commercial.

THE FARMER'S ADVOCATE OFFICE, London, Ont., Oct. 1st, 1883.

September has been an extremely dry month, so much so that very many farmers have been unable to plow for fall wheat.

The frost has done its share of mischief this month. The damage in some sections is really serious. Corn, beans, clover, and some fruits have been seriously injured in many sections.

WHEAT.

It is now pretty generally admitted that the wheat crop in the principal countries producing that cereal will this year yield in the neighborhood of 250,000,000 bushels less grain in the aggregate than was gathered in the preceding year.

is rather dull and little doing. The change in the U. S. tariff has crippled the malsters, who are idle and likely to be so, as the duty as it now stands is about prohibitory.

This crop has been very much damaged with the frost. The summer being so cool, kept the corn back, and being some two or three weeks later than usual, the result has been serious.

have suffered in like manner as the corn, and all that were not ripe were completely spoiled, and are useless.

are coming out of the ground much better than any one expected. There were some very fine loads on the London market Saturday last, and prices are much easier.

The Pittsburgh Stockman says: "The hog market continues to fluctuate more or less as the season advances, but, as has frequently been intimated in these columns, its course is steadily downward."

are more plentiful than was at one time supposed, and there will, we think, be plenty for home use. The export trade will be light, and shipments will have to be carefully selected.

keeps very quiet, and buyers and sellers are apart in their views. The shipments from Montreal have been a long way in excess of any previous year, being some 180,000 boxes more than same date last year.

Choice lots are picked up at good prices, but we fancy there is a lot of butter lying about the country in hands of farmers and dealers. What will be the price for such, time will tell.

FARMERS' MARKET.

Table listing various agricultural products and their prices, including wheat, corn, beans, potatoes, and livestock.

GRAIN AND PROVISIONS.

Table listing grain and provision prices for Montreal, Oct. 4, including wheat, corn, and various meats.

LIVE-STOCK MARKETS.

BRITISH MARKETS, PER CABLE. Liverpool, Oct. 1, 1883.

CATTLE.

The cattle market during the week has been rather sluggish and weak at the decline of last week.

Table listing cattle market prices for Liverpool, including choice steers, good steers, and inferior and bulls.

SHEEP.

Prices during the week have not changed. The market is slow at the recent decline.

Table listing sheep market prices for Liverpool, including best long woolled and seconds.

East Buffalo, N. Y., Oct. 6.

Beeves—Receipts to-day, 1,400 head; consigned through, 250 cars; market fairly active and prices a shade higher; fair to good shippers, \$5.25 to \$5.55; choice, \$6.05.

Montreal, Oct. 1.—At Acer & Kenned's yards the receipts of shipping cattle were fair and met a moderate demand at steady prices, viz: 5c. to 5 1/2c. per lb. live weight.

CHEESE MARKET.

Liverpool, 1st Oct. (per cable)—Cheese 56s. 6d. Utica, N. Y. Oct. 1, 1883.

We have had a booming market to-day, every one being anxious to secure a portion of the early September make. Transactions for the day are as follows: Six lots, 700 boxes, at 11 1/2c.

Little Falls, Oct. 1, 1883.

Trade in cheese has been very active to-day, and prices show a gain of nearly one cent per pound above last week's figures. This is very encouraging to dairymen, who had been fearing from the recent slack markets that cheese was not going out for the balance of the season as well as had been expected.

Table listing cheese market prices for Little Falls, including various types of cheese.

Special Notices.

The Ontario Veterinary College, Prof. A. Smith, Principal, opens at Toronto on the 24th Oct., and as usual will attract a large attendance.

H. S. Anderson, Cayuga Lake nurseries, Union Springs, N. Y. Price list of small fruits. The Tyler raspberry was introduced, and has added to the good name of these nurseries.

B. K. Bliss & Sons, New York, autumn catalogue of bulbs, small fruits and garden requisites. A handsome book, quite up to the firm's usual standard.

J. E. Shenill, of Danville, Ind., sends us "The Future by the Past," being a review of one-half a century, containing also considerable reading and information for farmers and others.

J. A. Simmers, Toronto, Ont., has issued a very neat descriptive catalogue of hardy Dutch flowering bulbs, florist supplies, &c. This house is well known for their choice seeds, and your custom is desired. Dried natural flowers and grasses are a speciality with them.

The 15th annual circular of Messrs. Robinson & Johnson, proprietors of the Ontario Business College, at Belleville, Ont., shows the great advantages of a business course at their college, and from the great number of students who have passed, the great extent of country from which they have been drawn—from the West Indies, from Newfoundland, Minnesota and Manitoba, besides our own neighbouring provinces, and the very flattering accounts sent back by these pupils, prove that this college is doing a good, useful work, and deserves more than the present large patronage it receives.

Creelman Bros., of Georgetown, Ont., shipped 18 knitting machines to England a few days since. The business is rapidly extending, and deservedly, for they manufacture a good machine.

We are in receipt of the Swine Breeders' Manual, from P. M. Springer, Secretary, Springfield, Ill. The manual is a neat, useful and valuable guide for breeders of pigs.

AGRICULTURAL IMPLEMENTS.—Manufacturers and others will have noticed the excellent engravings of implements, &c., which have appeared in our columns, and we invite any who wish to have cuts made of their premises or machinery, to write us for terms, &c.

For seven years past Edwin Alden & Bro., Advertising Agents, Cincinnati, Ohio, have issued annually their *American Newspaper Catalogue*, but never duplicated it. It has differed year after year in that it has been modified by wants and experience of advertisers.

BEATTY'S ORGANS FOR \$35.00.—Special attention is called to Mayor Beatty's Parlor Organ advertisement in another column. Any of our readers who are in want of a Cabinet Organ at a reduced price should order at once from the advertisement, as the time is limited to only seven days from date of this paper.

The 4th annual matches of the Sherbrooke Ploughmen's Association are to be held in Lennoxville, on 17th October. A large prize list is offered. As Lennoxville is the centre of one of the best farming districts in the Eastern Townships, this would be a good opportunity for some of our western plough manufacturers to show their goods. For further particulars address R. H. Tylee, Sec., Lennoxville, Que.

LARGE SHIPMENT OF CONDENSED MILK.—Truro Condensed Milk & Canning Co., on Monday shipped by rail to G. Reading Crowe, Winnipeg, Manitoba, 700 cases of condensed milk—33,500 cans—two car loads. This, we believe, is the largest single shipment ever made in America, and took every can the company had in the warehouse. Experience is proving that the article produced by the Truro Co. is far superior to Swiss condensed milk, and is fast driving it out of the markets of the Dominion.—*Truro Guardian*.

We referred some time ago to this new enterprise and hope soon to have one or two started in Ontario and Quebec.

GROWTH OF A LARGE INDUSTRY.—Such has been the growth of the business of Wm. Knabe & Co., piano manufacturers, that even their immense factories have not been large enough for them. To accommodate this increasing business they have leased a large and convenient building just opposite their factories. The building was formerly used as a tobacco factory, and its size suits well for the purposes to which it will now be put. The building is on the southwest corner of Eutaw and West streets, fronting 155 feet on West street and 45 feet deep, with an engine house 40 by 45 feet. It is four stories in height, with a basement. By this extensive addition the firm will be able to increase its production to 70 pianos a week.—*Baltimore American*.

NEW PUBLICATIONS.

Canadian Methodism; Its Epochs and Characteristics. By Rev. Egerton Ryerson, D. D., L. L. D., Toward the Sunrise. By Hugh Johnson, M. A., B. D., Toronto: William Briggs, Publisher, 78 and 80 King street east, Toronto, Ont.

The above works are both exceedingly well got up, whilst "Canadian Methodism" contains a vast fund of good reading and information on Methodism by Dr. Ryerson, than whom no better author for the subject could have been selected. He was thoroughly familiar with his subject, forcible in his style, and makes dry details as interesting as a novel. "Towards the Sunrise," by Rev. H. Johnston, is a very well written book of travel. As a proof of its quality it has now reached its fourth edition.

The premiums which we offer elsewhere to those who aid us in swelling the roll of our subscribers make the most desirable list ever offered. The different articles have been selected with great care and will meet the wants and wishes of all classes and ages.

The FARMER'S ADVOCATE, published at London, is one of the very best and most reliable agricultural papers published. Every farmer and fruit grower should have it.—[Review, Niagara Falls, Ont.]

DAIRY NOTES.

Slow milking of cows never secures the full product. Partial milking soon dries the cow, and greatly reduces her value.

The State of Maine has 49 cheese factories, with an average of 107 cows to each factory, 60 being the lowest and 300 the highest in number.

The nicer the quality of cheese produced, the higher the price it will bring, and the more desirable will it become as an article of food.

A Cheese King.—Mr. D. M. McPherson, of Lancaster, the cheese king of Eastern Ontario, controls no less than sixty-four cheese factories capable of turning out from 22,000 to 25,000 boxes per month.

The regular use of salt is indispensable to the health of a cow, and consequently to the successful management of the dairy. A certain quantity of salt should be given daily with the food, precisely as we take it ourselves.

Mr. V. E. Fuller's famous Jersey cow, Mary Anne, at Oaklands, near Hamilton, Ont., has been tested for a period of seven days in the matter of butter-making by a committee of practical men. All the processes, from milking to the weighing of the butter, were done under their watchful eye, and the result, it is affirmed, has never been equalled. The net amount for the week was 26 lbs. 9 oz. of unsalted butter, and 27 l. s. 9 1/2 oz. of salted!

Increased attention needs to be given by cheese makers to the matter of curing cheese. Cheese factories should be provided with suitable curing rooms, where a uniform temperature of the required degree can be maintained, together with a suitable degree of moisture and sufficient supply of fresh air. The expense required to provide a suitable curing room would be small compared to the increased value of the cheese product thereby secured.

Small dairymen and farmers, having only a few cows, labor under some difficulties in the way of providing suitable curing room for their cheese. Yet if they have a clear idea of what a curing room should be, they will generally be able to provide something which will approximate to what is needed. Good curing rooms are absolutely needed in order to enable our cheese makers to produce a really fine article of cheese.

The Dairy says cow stories are becoming so wonderful in their dimensions as to be placed on a par with fish stories. The subject, however, is not one for ridicule, but for sound, sober fact, and, as there is always some fire where smoke is seen, it would be interesting to get at the facts in these cases. If the owners of all these extraordinary cows would only form an association, irrespective of breed, and have undoubted tests made in a thoroughly complete manner, and record them with such evidence as would be indisputable, the facts would be of great importance.

The curing of a skim-milk cheese, skillfully conducted, enriches it in fat and brings it up to a very slightly inferior condition to that of a full milk cheese. This same digestive property is excessively developed by long curing, and exists more largely in the more highly flavored cheese; the flavor being produced by the decomposition which increases the digestive activity. Cheese of this kind is not used as food strictly, but as a condiment to aid digestion of other food. It is used as fruit is, at the end of a meal, nominally as a relish, but really as a help to digestion.

The sense of smell is of the greatest importance in the business of dairying, and it is by no means exaggerating its importance to say that an acute olfactory sense is indispensable to success in fine dairying. The nose has, first, a duty to perform in the stable in detecting the wrong scent of the cows. Rightly this is a sweet, agreeable odor, when the animals are kept clean and fed upon clean food.

The Dairy says:—Small cows are sometimes thought desirable for family use. The small, rough Shetland cow is now proposed as a subject for importation and booming. This cow has no claims we should respect. It is a creature of untoward environments and hard fortune. It was born of sorrow and grief, and reared in misery and starvation upon storm-swept rocks and moors where no tree can survive and where the coarse heather is its bed and its food, and the lee side of a rock its shelter. It is small; very small; thirty inches high or thereabouts; but where a goat can be kept this would make a better family cow than the Shetland.

The Dominion Exhibition.

During the past week an important exhibition has been in progress at St. John, N. B. For some years the Dominion Parliament has granted an annual sum in aid of one or other of the Provincial Exhibitions, and this year the subsidy has gone to St. John. The Legislature of New Brunswick has also acted liberally in the matter, and the enterprise of the citizens has done the rest. The exhibits have been numerous and varied, and the daily programme of events has been arranged with a view to making the occasion as attractive as possible. The attendance during the week was good, and the show a decided success. Unfortunately for the interchange of visits and opinions between east and west, the great exhibitions up here come off at the same time as those down by the sea, otherwise these occasions might become the means of inducing many to take a trip from one part of the Dominion to another. Excellent permanent buildings have been erected for the accommodation of the Dominion Exhibition this year, and it is highly probable, therefore, that even without Dominion aid the annual show will become a permanent institution in St. John.

At the late "Royal" show at York, England, there were hundreds of thousands of good farmers present, and no horse race or even mule "farce;" and last month there were 20,000 people at the N. Y. State fair on one day and over 10,000 people the next day in a heavy rain, and no side shows or horse trots.

On receiving this copy of the FARMER'S ADVOCATE we trust that our readers will immediately renew their subscriptions without waiting until they expire. We shall be pleased to forward an extra copy of the ADVOCATE to every person who wishes to use one in securing new names.

NEW ADVERTISEMENTS.

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

THE FARMER'S FRUIT EVAPORATOR

Dries beautifully in two hours on cooking stove while other duties are going on. Prices in reach of all. Address
J. S. STONE,
213-b CHARLOTTE, N. Y.

THE RAILROAD COLORS!

These Colors are very finely ground, and are all of the same thickness and consistency as white lead, only requiring to be thinned with raw linseed oil or turpentine to be ready for use.

THEY ARE THE BEST PAINTS IN THE WORLD!

for all interior or exterior painting, and are composed of TWENTY COLORS, all of which, in combination or contrast, are suitable for either purpose. The

MOST ECONOMICAL PAINT!
One painting with the Railroad Colors is the equivalent in every respect of two paintings with colors made of the best white lead. The

MOST DURABLE PAINT!
which can be obtained by any means and at whatever cost, and they will resist the influence of light, heat and moisture longer than any other paint. The superiority of the Railroad Colors for house painting, agricultural implements and general use is no mere matter of assertion. They have stood the test for years, and more than one hundred thousand houses stand at this writing throughout Canada and the United States painted with the Railroad Colors, and among all the owner of these there has not been in a single instance a reasonable ground for complaint.

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WILLIAM JOHNSON,
578 William St., Montreal, P. O. Box 926.
27 Sample Sheet and Book on Painting supplied on application. 214-y

DR W. E. WAUGH, OFFICE The late Dr. Anderson's, Ridout Street, LONDON ONT.
195-t.

Stock Notes.

Breeders will confer a favor by sending us prompt reports of all live-stock transactions of general interest coming within their knowledge.

Mr. S. Lemon purchased, at the Guelph exhibition, of Mr. Peter Arkell, of Teeswater, one Oxford down ram and four ewes—imported.

We understand that H. Y. Arkell, of Goderich, Ont., has sold the young bull, Grand Duke of Connaught and Ridgewood, to B. C. Rumsey, of Niagara Stock Farm, Buffalo, N. Y.

Mr. Geo. Ballachey, of Brantford, Ont., has purchased from Mr. Douglass, of Caledonia, Ont., the red bull calf "Britannia's Baron," got by a son of the fourth Duke of Clarence (33597).

The Gov't has issued a proclamation prohibiting the importation of cattle from the United States and the Northwest Territories, in accordance with the Animal Contagious Disease Act of 1879.

At the sale of the Duke of Westminster's Short-horns on the 6th ult., at Holker, Mr. Richard Gibson, of Delaware, Ont., late of Ilderton, Ont., purchased Duke of Oxford 60th, at a high figure.

Messrs. Green Brothers', of Oakville, Ont., imported heifer Jewel VIII., has dropped a fine cow calf, got by Mr. Duthie's Cruickshank bull Cayhurst, who took first honors at the Formartine Show, held at Udory, Scotland, last July, as a two-year-old. Cayhurst was by Roan Gauntlet (35284) out of Cochineal.

The special attention of our readers is directed to the advertisement in this issue of the 7th annual sale of stock under the auspices of the Huron Live Stock Association. The sale will be held at Clinton, Ont., on the 24th inst., and buyers as well as sellers will find this an excellent and most convenient market, carried on honestly and honorably by farmers and for farmers.

Mr. Wilken, Waterside of Forbes, Scotland, has bought 54 Aberdeen or Angus cattle for Canada for the Hon. J. H. Pope; for the Hon. M. H. Cochran of Hillhurst; and Messrs. Walker and Son. Mr. Wilken has also purchased for his own herd from Mr. Strachan, Western Fowls, the two-year-old heifers Signet 4th and Adelaide 6,135.

Cattle and sheep from the United States and Canada arrived at Liverpool during the week ending 14th Sept., in almost double the numbers of the preceding week while the quantity of dead meat from the same ports also showed an increase, particularly mutton, which was above the average of the past few months. The totals were—2,143 cattle, 2,644 sheep, 5,883 quarters of beef, and 625 carcasses of mutton.

The Department of Agriculture have received advices from Liverpool to the effect that a cargo of 1,000 sheep from Canada have been ordered for slaughter on account of one sheep, said by the authorities there to have been effected with scab on landing. A strict investigation has been made by Prof. McEachren, the chief quarantine inspector at Point Levi, and he greatly doubts that the disease was scab at all, as if scab had shown itself during the voyage all the sheep in the pen would have been affected. It is his opinion it was some skin eruption that had shown itself during the voyage in consequence of bad weather. It is a well-known fact to the trade that skin eruptions are more common among sheep at sea during boisterous weather, and that sheep wet with salt water and closely penned are apt to suffer from eczema, which may easily be mistaken for scab. It is hardly needful to point out that it is absolutely necessary for Canadian shippers, seeing that our stock is exposed to such severe and apparently one-sided inspection, to use the greatest care in forwarding only healthy animals. In this case 999 sheep were sacrificed because one poor lamb was announced tainted with a scheduled disease. This ought to emphasize the absolute necessity for the greatest care being exercised by our shippers and all concerned.

(Continued on page 322.)



PROSPECTUS.

Government of Canada Loan for \$4,000,000, 4 per cent. Currency Bonds.

THE MINISTER OF FINANCE FOR THE Dominion of Canada is authorized to receive tenders for a loan of \$4,000,000 currency bonds, bearing interest from the 1st November, 1883, at the rate of 4 per centum per annum, payable half-yearly on the 1st May and 1st November of each year, at his office in the Finance Department, Ottawa.

This loan is issued under the authority of an Act of the Parliament of the Dominion of Canada, passed during their last Session (46th Victoria, cap. 2, sec. 4.)

The object of the loan is partly to provide for the payment of debts maturing or redeemable in the course of the current fiscal year, and partly for expenditure on public works.

The principal of the loan now offered is to be repaid at Ottawa in twenty years.

Subscribers will receive bonds to bearer, which may at any future time be converted into registered stock.

The subscription list will be opened on Wednesday, the 17th day of October next, and will be closed on Saturday, the 20th day of October next, at four o'clock p.m., and tenders in the accompanying form, marked on the outside "Tenders for Debentures," will be received at the Finance Department, Ottawa, up to and including the latter date, at the hour mentioned.

Tenders must be made for not less than \$1,000, and in multiples of \$1,000.

The allotment of the loan will be made as soon as possible after the close of the subscription list; the amounts allotted will be payable on the 1st day of November next, and Bonds will be issued shortly after that date.

Copies of this prospectus and forms of tender can be obtained from the undersigned, from the several Assistant Receivers General at Montreal, Toronto, Halifax, Saint John, Winnipeg and Victoria, and from the Dominion Auditor at Charlottetown.

J. M. COURTNEY Deputy Minister of Finance. Finance Department, Ottawa, September 21st, 1883.

Form of Tender for Bonds. TENDER.

Government of Canada Loan for \$4,000,000, 4 per cent. Currency Bonds.

Amount tendered for \$..... Rate..... per cent.

SIR,— hereby tender for the sum of \$ nominal capital in the above mentioned issue in bonds to bearer, at the price of per cent., and engage to accept the said sum, or any portion thereof which may be allotted to me, and to pay therefor at the said price and in conformity with the terms of your prospectus of the 21st September, 1883.

Name..... Address..... Date.....

To the Honorable The Minister of Finance, Ottawa. 214-



TRADE MARK BUY THE GENUINE BELL ORGAN made only in Guelph.

IT HAS STOOD THE TEST FOR 20 YEARS.

Send for our Catalogue. 214-7 WM. BELL & CO.

FALL PLANTING! TORONTO NURSERIES.

We offer for Fall Planting a fine stock of FRUIT TREES! ORNAMENTAL TREES! FLOWERING SHRUBS! GRAPE VINES, &c.

Catalogues free on application. Orders by mail for shipment direct to purchasers have special attention and satisfaction guaranteed. GEO. LESLIE & SON, LESLIE, ONT. 214-a Growers of "Gold Medal" Nursery Stock.

KNABE PIANOFORTES.

UNEQUALLED IN TONE, TOUCH, WORKMANSHIP and DURABILITY WILLIAM KNABE & CO., Nos. 204 and 206 West Baltimore Street, Baltimore, No. 117 Fifth Avenue, N. Y. 214-c

THE CHEAPEST FORCE PUMP IN THE WORLD!

Especially adapted for spraying fruit trees, watering gardens and lawns, and washing carriages. Will throw a steady stream 60 feet. Can be applied to any service that a cistern or force pump can be used for.

Send for Catalogue and Price List. FIELD FORCE PUMP CO., Lockport, N. Y., U. S. A. 18-y

RUSSIAN MULBERRY The best Fruit, Timber and Ornamental Tree in America. RUSSIAN APRICOT. RUSSIAN JUNE BERRY. Also the best SILK WORM EGGS and a complete text book on silk culture. Send for a price list. Address CARPENTER & GAGE, Bower, Jefferson Co., Neb., U. S. A. 213-y



NORMAN'S CURATIVE ELECTRIC BELT INSTITUTION Established 1874. NORMAN'S Curative Electric Belts, Bands, Insoles and Trusses are guaranteed to be the best remedy known for the immediate relief and permanent cure of Nervous Debility, Lame Back, Neuralgia, Rheumatism, Liver, Stomach and Chest Complaints, Constipation, and all diseases of the Nerves, Genital Organs and Rupture. Circular and consultation free. A. NORMAN, 4 Queen Street East, Toronto, Ont., 213-y BATHS.—Electric Baths, Vapor Baths, Sulphur Baths and Hot and Cold Baths always ready.

THE EVAPORATOR!

THE TOPPING PORTABLE EVAPORATOR

Will dry all kinds of fruits and vegetables. Four different sizes with heater attached, all ready for use. They will pay for themselves in from one to two weeks. Here is proof: Say we take a No. 2 dryer, that dries 10 bushel per day; in six days, 7 lbs. to the bushel on an average, is 420 lbs. per week. At the present prices, 13c. per lb., this is \$54.60, which more than pays for the dryer the first week in use. Please figure for yourself. Slicer, cooper, apple, peach and potato parers. Send for Circular.

H. TOPPING, Dried Fruit Process, MARION, N. Y. 213-b

MR. C. B. RUDD, VETERINARY SURGEON can now be consulted at 175 Horton St., London, Ont. 207-11

ENGINES

from 3 to 60 horse-power used by farmers, threshers, cheese and butter factories, brick-makers, printing offices, cabinet and planing factories, saw mills and all purposes requiring steam power.

BOILERS

from 4 to 100 horse-power, stationary, upright and locomotive, made of steel or iron, for all duties; also boiler for greenhouses. Llewellyn's Patent Heater Filter, Injectors, Force Pumps, Engineer's Brass Goods and Fittings.

WRITE FOR 1883 CATALOGUE.

E. LEONARD & SONS, LONDON, CANADA.

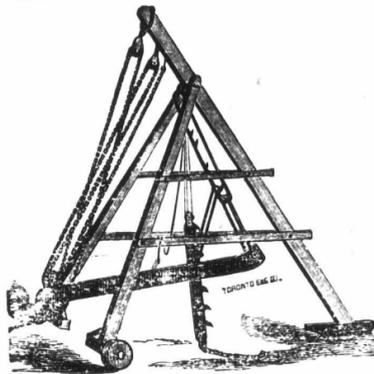
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Monarch Lightning Sawing Machine!
Sent on 30 Days Test Trial. A Great Saving of Labor & Money.



A boy 16 years old can saw logs FAST and EASY. Miles Murray, Portage, Mich., writes: "Am much pleased with the MONARCH LIGHTNING SAWING MACHINE. I sawed off a 30-inch log in 2 minutes." For sawing logs into suitable lengths for family stove-wood, and all sorts of log-cutting, it is peerless and unrivaled. Illustrated Catalogue, Free. AGENTS WANTED. Mention this paper. Address: MONARCH MANUFACTURING CO., 163 E. Randolph St., Chicago, Ill.

PROCURER THE BEST.



The Whitfield Stump Extractor.

The superiority of this machine consists in the rapidity and ease in which it can take out the largest stumps; the ease with which it is operated by man or beast, and the great strength and durability of this machine. It leaves no holes to fill up, nor any stumps or snags in the ground. Send for circular of testimonials and particulars about it before purchasing an inferior machine.

Address, JOHN WHITFIELD, Dominion Chain Works, Front Street, Toronto

FIRST-CLASS ENGRAVING
DESIGNS SUPPLIED ON WOOD.
TORONTO ENGRAVING CO.
(BRIDGE & BEALE) COR. JEROME

OUR FAMILY KNITTING MACHINE.



Send for descriptive Catalogue and Testimonials from the blind. CREELEMAN BROS., GEORGETOWN, ONT.

UNDER SHIRTS, DRAWERS, SCARFS, CHILDREN'S WEAR, HOSE, CAPS, GLOVES, MITTS, &c. All sizes can be made on OUR FAMILY MACHINE.

Our Book of Instructions will teach you all. It is so simple 6 undershirts can be made in one day, giving a profit of 75 cents each. Blind girls can knit and finish one doz. pairs of socks per day, and \$2, \$3 and \$4 per day can be easily made on our Great Family Canadian Ribbing Machine.

ONTARIO BUSINESS COLLEGE BELLEVILLE, ONT.

Within the last 15 months students have been in attendance from 11 different Provinces and States. The College is conducted by accountants of long and varied counting-house experience, and it is the practical training imparted to which is due the unparalleled success of the Institution. NO VACATION—STUDENTS MAY ENTER AT ANY TIME.

Send for College Circulars. Address: ROBINSON & JOHNSON, 213-c BELLEVILLE, ONT.

Ontario Veterinary College TEMPERANCE STREET, TORONTO.

The most successful Veterinary Institution in America. All experienced Teachers. Fees, Fifty Dollars per Session. Session 1882-3 begins Oct. 25th. Apply to the Principal, PROF. SMITH, 17 & 19th, TORONTO, CANADA. 201-1

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most profitable Raspberry. Send for full account.
SMALL FRUITS. embracing all varieties. also a superior stock of fruit trees. Illustrated Catalogue free, telling how to get and grow them. J. Lovett, Little Silver, N. J.

BULBS

MY AUTUMN CATALOGUE FOR 1883, OF CHOICE HYACINTHS, TULIPS, CROCUS, NARCISSUS, LILIES, SNOWDROPS and other fall planting BULBS will be mailed FREE to all applicants. The collection is the finest in Canada, and all Bulbs will be sent FREE by mail. WM. RENNIE, SEEDMAN, TORONTO.

STOCK NOTES.

(Continued from page 321.)

The President of the United States, in view of the prejudice against American pork abroad, has appointed a commission to investigate into the process of packing.

Our stock breeders must have noticed with pride the excellent cuts of stock of our leading farmers which are appearing in our pages, and we invite any who wish to have engravings made of their stock to write us for terms, &c.

It is found by experience that the food of healthy oxen, of whatever size, is nearly one-fifth of their own weight of turnips daily, or about one-fiftieth of their weight of hay, straw, or other dried food.

Hugh Kelly, cattle shipper of Toronto, has entered an action against the Mississippi Steamboat Line for the loss of 21 head of cattle detained at sea 51 days from the negligence of the captain in not applying for assistance to his disabled vessels from passing steamers.

A very fatal cattle disease termed the bloody urine has broken out on a farm near Newburg, N. Y., baffling the efforts of veterinary surgeons. Fourteen cows have died. The doctors say these are the only cases of the disease ever occurring in this country, though it is common in Europe.

At the Agricultural Fairs preference should be given to walking, rather than to trotting horses, for surely this is much more important. A fast walking gait should be cultivated rather than fast trotting. In a journey, lasting some days, the fast walker would ultimately outstrip the trotter.

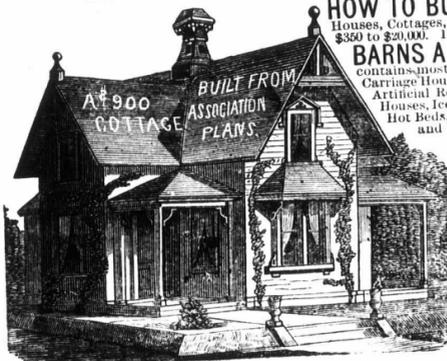
A convention of representatives of all classes interested in the animal industries of the United States will be held in Chicago, Nov. 15 and 16 for conference concerning contagious diseases among domestic animals. Cows were inoculated here for the purpose of ascertaining if pleuropneumonia is contagious. No result tending to establish that conclusion have followed.

Mr. Wm. Shier, of Sunderland, Ont., writes:—I have made the following sales of Shropshire sheep and lambs this last month: Sixteen lambs to Wm. M. Miller, Clarmont, Ont.; one ram lamb to Wm. G. St. John, Sunderland, Ont.; one ram to George Shier, Vroomantion, Ont.; one ram lamb and two shearing ewes to Samuel Doupe, Kirkton, Ont., all for good round figures. It pays to advertise in the FARMER'S ADVOCATE, the best farmer's paper published that I know of for the same price.

The Executive Committee of the British-American Shorthorn Association met at Guelph during the week of the Provincial Fair to consider the propriety of holding a combined sale of cattle at Toronto during the time of the Fat Stock Show in December. It was resolved to issue a circular to breeders asking how many animals they would enter for the sale, and if thirty or more were offered to go on with the arrangements for the sale. The animals to be sold under four grades of price, viz.: \$100, \$150, \$200 and \$300; the highest bidder above these to be buyer. The terms cash, and all cattle entered to be recorded or eligible to the B. A. H. B.

The Canadian Gazette of the 20th ult., says:—A consignment, consisting of fifty-nine Aberdeen or Angus cattle, was forwarded by Mr. Wilken, of Waterside, to Canada, by the Allan steamer Corean last week. It included five cows with calves at foot, four two-year-old heifers, all in calf, and ten non-pedigreed two and three-year-old black polled heifers, in calf to pedigreed bulls, purchased by the Hon. J. H. Pope, Minister of Agriculture. Two cows with calves at foot, and ten two and three-year-old heifers in calf, have been bought by the Hon. M. H. Cochrane, of Hillhurst. The remainder were consigned to Messrs. Walker & Sons, Ontario. Three Clydesdales were also on board, consigned to Mr. Sturgeon.

How to Build a House with little or no Money.



HOW TO BUILD A HOUSE, designs for Villas, Farm Houses, Cottages, and Suburban Residences, ranging in cost from \$350 to \$20,000. 1 Vol., large quarto, 178 illustrations. Price 50 cts.
BARN AND OUTHOUSES, (Just Published) contains most practical designs for Farm Barns, Stock Barns, Carriage Houses, Stables, Dairies, Hog Houses, Chicken Houses, Artificial Rearing Apparatus, Corn Crib, Granaries, Smoke Houses, Ice Houses, Bee Houses, Summer Houses, Bird Houses, Hot Beds, Green Houses, Graperies, How to lay out Farms and Gardens, designs for Lawn and Hanging Baskets, Garden Vases, Fountains, and valuable illustrated articles on Cheap Homes, Concrete Buildings, How to improve old Barns, etc. 1 Vol., large quarto, 200 illustrations. Price 50 cents.

"The wonder is that publications of this kind have not been issued before."—N. Y. Weekly Witness.
"Precisely meets a want which thousands have felt."—N. Y. Observer.
"The most practical book we have ever seen."—Episcopal Methodist.
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These books must be seen to be appreciated—a mere circular or catalogue can give no idea of their value. On receipt of \$1.00 we send both books, post paid, for examination. Both can be returned, if not entirely satisfactory, and the money will be immediately refunded. Address: Co-operative Building Plan Association, 21 Beekman St., (R. & 202) New York.

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Yours truly, H. D. KEMMANN, Agent.

Monarch Mfg. Co.—Dear Sirs: I just wrote you a few lines to let you know what success I have had with the Monarch Lightning Potato Digger. I received it to-day at 1:20 o'clock and thoroughly tested it in the potato field, and sold 8 Diggers in 3 hours. I will give the agency my whole time, and travel around the County with a wagon-load of Diggers. Please to have an advertisement put in the Rockport "Sentinel." I want to tell you that the Digger exceeded by far my anticipations, after giving it a hard test. The ground was very hard and dry and covered all over with grass, and the Digger worked splendidly. I would not take \$50 for it and do without it. Ten men can't pick up the potatoes fast enough. I have sent money by express. Ship 3 Diggers right away.
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Yours truly, HIRSH METZ.

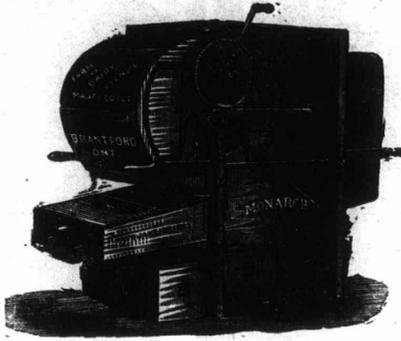
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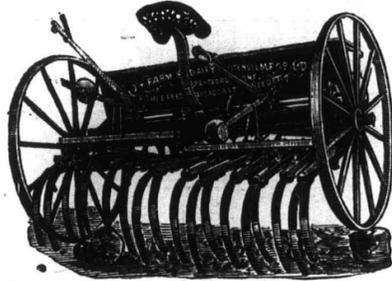
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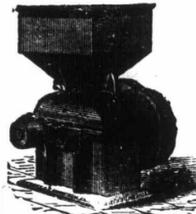
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