

FARMER'S ADVOCATE

AND HOME MAGAZINE

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THE FARMER'S ADVOCATE —AND— HOME MAGAZINE.

WILLIAM WELD, Editor and Proprietor.

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Published in the Dominion.

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It is our aim to make the next volume better and more interesting than any previous one, and our list of premiums for obtaining new subscribers for 1883 are more liberal and of greater intrinsic value than those offered by any other publication. Send for copy of Premium List.

A great many remittances are sent in without name or Post Office. We can take no notice of such payments until the name, etc., is forwarded.

The Exhibitions.

THE INDUSTRIAL EXHIBITION

Opened at Toronto on the 6th and continued till the 17th inst. The appearance of the ground continues to improve. The trees are growing finely, and flower beds have been made and planted; the roads were in good order, and a great amount of care has been displayed to make the place as attractive as possible; indeed, the very fine, commodious buildings and well kept grounds were themselves objects well worthy of a visit. The extensive view of the lake that was to be had from the grounds, and especially from the balcony of the main building on Thursday the 14th, when the waves ran mountains high, and lashed the shore in their fury was a thing long to be remembered by those who reside inland, and who do not have many opportunities of witnessing such a magnificent sight. Upon entering the grounds from the railway depot, the first building we noticed contained a large display of splendidly finished caskets and coffins of Canadian manufacture. So we crossed the road to the carriage hall, in which the exhibit was principally of American manufacture, and was not quarter as good or as large as the display made by Canadian manufacturers in former years. Prominent among the vehicles were three hearses, one emblazoned with the arms of a secret society. In the main building and the agricultural hall the exhibit was small compared with that of previous years, and to make up for the deficiency and make anything like a creditable display, the goods were spread out as much as possible. In the agricultural department scarcely anything was shown but what had been noticed and described in former years, evidently showing the waning interest of manufacturers, and in no place was this evinced more than in the mechanical hall, which was bare of interest, and did not contain one-fourth of the number of the machines that were shown when first this exhibition was instituted.

The exhibit of horses, though not large, was good. The show of cattle would have been a failure had it not been for Mr. Whitefield's, of Rougemont, large entry of first-class animals, without which it would have been far inferior to that of previous years. Sheep and swine were not so well represented as they had been in former years. Had it not been for other attractions such as racing and bombardment, the latter of which swelled the treasury by \$10,000, the exhibition would have been a financial failure. The President of the Association being such a pronounced total abstinence advocate, we were astonished to see the enormous array of places for the consumption of intoxicating drink. The sale of strong liquors on the ground was illegal, and at the commencement of the fair the vendors of such were taken before the magistrate and fines inflicted which might have been looked upon as an equivalent to license for the sale of in-

toxicants, for instead of the thing being followed up, and an attempt made to prevent the sale, it was quietly winked at. Then, again, betting was freely indulged in in the horse ring without the slightest attempt being made to put a stop to such a pernicious practice. Such scenes as we have described are highly demoralizing, and cannot be too strongly condemned, and in no other exhibition grounds that we have attended were such disgraceful practices allowed; such evils must sooner or later tend to ruin the society, for the farmer and other supporters of the fair will not tolerate such demoralizing displays under the name of Industrial and Agricultural Exhibitions. And we regret that the management, in their endeavor to make the exhibition a success financially, have seen fit to countenance such evils.

THE PROVINCIAL EXHIBITION OF QUEBEC

was held in Montreal from the 14th to the 22nd of September. The first week very little interest was taken in it by the public, as only a very few visitors attended; but the second week, as soon as the farmers came with their stock, the visitors poured in in masses. This should show to the farmers and citizens that it is in the hands of the farmers that the success of these exhibitions lies, for both in Montreal and Toronto the week devoted to other interests only resulted in a heavy loss to both of the Associations; and we know that the feeling of farmers is this, that they cannot or will not lose more than a week at any of the exhibitions. In fact, three or four days is quite sufficient time for stock to be shown.

The agricultural buildings at Montreal are superior to those in Toronto, both in design and convenience; in fact, we consider them the best we have seen either on this continent or in Europe for Provincial or State purposes. Of course we do not compare them to the national buildings of England, France or the States.

The exhibit at Montreal excels all others on this continent in the display of Ayrshire cattle, but in other departments we do not consider it equal to the western exhibitions; in implements and machinery it fell very far short of many exhibits in the west.

Time prevents us at present from particularizing more minutely on these exhibitions, but during the winter we trust that contributions and editorial will appear that may tend to the improvement and interest of farmers. We enquired of the Secretary and Directors why this exhibition was held in the same week as the Provincial was being held in Kingston, but they could not explain. Many of the farmers and exhibitors at Montreal complained because the exhibitions were both held at the same time, and they were unable to attend at Kingston because they thought it their duty to be at their own Provincial Exhibition. This bad management has tended to injure both of the Provincial Exhibitions.

THE PROVINCIAL EXHIBITION OF ONTARIO

was held at Kingston from September 18th to 23rd. This exhibition has not been such a financial success as it should have been. This is accounted for principally by the partizan feeling of members who have been and some who are now connected with the Board of Agriculture and Arts. This body is not united; some have actually wished to see a failure in Kingston, and have worked hard for the private organization of Toronto. That Association has done its utmost to destroy the Provincial Exhibition. They allured the visitors from the east, and have attempted to raise discord in the west, and by some means the collision of the two Provincial Exhibitions has been brought about. Various reports are circulated in regard to this, but the facts furnished us by Mr. Wade, the Secretary of the Ontario Exhibition, are these, namely: He wrote to the Secretary of the Quebec Exhibition, weeks before they had appointed their time, and informed him of the time appointed for holding the Provincial Exhibition at Kingston. We trust this bungle, whether intended or not, will be traced to its proper source, but there are so many who disregard truth, that perhaps the farmers will never know who to blame.

The exhibit of cattle at the Exhibition has been pronounced the best that has ever been assembled at an Exhibition on this continent. Some of the inferior, and even the prize animals that had been exhibited at Toronto, were sent home to the farms, far better animals having been shown at Kingston. The sight of the cattle alone ought to be ample remuneration to any one attending this Exhibition. Mr. Whitfield, the greatest exhibitor of cattle in Canada, had left his second quality of stock in Montreal.

The weather was much against the success of both these exhibitions, the rain falling in torrents and deluging everything, making the roads very muddy. In fact, in Montreal a young tornado swept over the grounds, tearing down fences, demolishing many ornaments, ripping the flags to shreds, blowing all the tents down, breaking the glass of the main building, completely deluging the implement building and damaging the goods in the main building. The tornado was not quite as bad at Kingston, but the continued wet prevented many from attending, and drove thousands from the grounds. This undoubtedly tended to diminish the receipts of both the exhibitions materially.

THE SOUTHERN COUNTIES EXHIBITION

was held at St. Thomas from the 19th to the 22nd Sept. From some cause it was not attended with the same success that had been experienced in former years, probably from the proximity of the Western Fair. It might safely be said that almost without exception the various classes were inferior to last season, especially in live stock, which did not approach that of last year, either in quantity or quality. Poultry was very poorly represented. As might have been expected from the high character of the neighborhood for fruit and vegetable raising, the display, considering the season, was very excellent. The dairy exhibit was also good, Mr. Andrew Miller, of Yarmouth, taking four first prizes in butter. The chief attraction was the Caledonian games, which drew a large crowd to the grounds on Thursday, 21st, but on the other days the attendance was thin.

THE WESTERN FAIR,

held in the city of London from Sept. 25th to 29th, has been pronounced by Americans and others to have been the best really agricultural exhibition held this year, either in Canada or the States. Larger assemblies of sight-seers have been assembled to see horse-racing and other outside attrac-

tions, but the Americans that visited this exhibition say that at no exhibition held in the States has there been such a fine display of matched carriage horses, driving horses, and heavy draught. In the exhibit of sheep the display has been admitted to have been the best ever held on this continent. In fruit, grain and roots it was the best held in Canada. In Canadian built carriages, wagons and agricultural machinery it has also surpassed any other exhibition. The implement exhibit at Toronto was nearly equal to it. The display of horned cattle was not equal to the displays made at Kingston and Toronto. Montreal had a much finer display of Ayrshire cattle than any of the western exhibitions; also the display of polled Aberdeen, and in some classes of Durhams and Herefords, and heavy and saddle horses, Montreal exceeded the western exhibitions. The weather was very fine during the London exhibition, and the attendance was very large, far beyond what was expected, as there were four large exhibitions held during the same week, namely, Brantford, Hamilton and Belleville. As the ADVOCATE is published for the benefit of the farmers of this Dominion, it would be acting unfairly were we to publish a list of the prize takers at any one of these exhibitions without publishing the lists of those taking prizes in each Province. In each Province there were some exhibits that surpassed those in other Provinces, therefore we prefer to leave it to the gainers of honors to proclaim them when desirable rather than to fill the readable space in this journal with what can be of interest to but few, and will merely notice the more prominent exhibits.

CENTRAL FAIR AT HAMILTON.

In the western district of Ontario the exhibitions were so plentiful that not less than three exhibitions, Hamilton, London and Brantford, were held upon the same dates. This must have had an effect upon each of the three fairs. The different managers might easily so have arranged matters to prevent this clashing, and would have allowed some prominent exhibitors to be present at more than one of the fairs. The Hamilton Central was one of the most successful that has been held in that city; the crowds that thronged the grounds were more numerous than the directors had hoped for. The exhibition on the whole has been a great success. The grounds were in excellent condition. The arrangements of the main building were very creditable. Not only was the number of exhibitors larger than at former shows, but the displays were fuller and more attractive. In the horticultural buildings there was a splendid display of flowers and fruits. In this department Hamilton fully maintained her prestige of former years. Nigh to this building was the exhibit of potatoes, turnips and other roots, which was very fine. There was also a numerous exhibit of poultry. The show of agricultural implements included the exhibit of many of the prominent manufacturers. In live stock there were some excellent animals in all branches, and noticeable among them were the Jerseys, which attracted much attention. The entries of horses in all classes were numerous, and some of the animals possessed excellent points. The horse ring was in capital condition. It was the centre of attraction, and was surrounded all day long by large crowds to witness the judging of the various animals, and the racing, &c.

Taken altogether the fair was a success, especially in a financial point, and the management deserve praise for their efforts, and must be congratulated upon keeping this a strictly agricultural fair.

THE SOUTHERN FAIR, AT BRANTFORD,

we regret, was not as successful as might have been desired. The directors in future should endeavor to avoid holding the fair upon the same dates as

its more powerful rivals at London and Hamilton. The exhibit in the main hall was inferior to that of previous years. In the horticultural department the exhibit would have been very poor if it had not been for the plants furnished by the Young Ladies' College. Fruit, roots and vegetables were fairly represented. The display of agricultural implements was not so numerous as might have been expected from Brantford being the seat of so many large manufacturing establishments. The entries of live stock were not numerous, and there was nothing notable in the exhibit, which was disappointing. The attendance was only poor.

QUESTIONS ABOUT THE FAIRS.

A few great questions should be openly and fully discussed during the coming winter, and every independent, thoughtful farmer should be able to express his own opinion regardless of the opinion of any partizan or leader. The questions we open our pages for discussion on are these: Should township exhibitions be maintained or abandoned? Should the Provincial Agricultural Exhibition be maintained or abandoned? Should agricultural exhibitions be maintained for agricultural purposes? Should horse-racing be encouraged at agricultural exhibitions? What class or kind of amusements should we encourage to attract the farmers, farmers' wives, sons and daughters to agricultural exhibitions? What class should we elect to manage agricultural exhibitions? What should entitle a person to an office in connection with agricultural societies? Should officers or judges who have wilfully acted improperly be exposed? Should any regulations, by-laws, or Acts of Parliament be passed to prevent improper men being placed on the boards of directors? What should be considered proper or improper acts for a candidate for office? Should character be considered when electing a person to any office connected with agriculture? Should we endeavor to elevate the morals of the agricultural class? Why did not the western dairymen hold their fair at the same time that the Provincial Exhibition was held? Why did the President of the Industrial Exhibition attempt to take undue advantage over a competing exhibition? Why did he insult a plain, practical farmer when asking for his rights? Why did he and some of his associates pretend to deny the fact that they attempted to injure the Provincial Exhibition; also that they have taken possession of the property that justly belongs to the farmers of Ontario, and have refused to give them their just rights in recompense? Why has there been a combination to elect officers of the Western Fair from among citizens to the exclusion of independent farmers, and men who have never been known to take any active part in agriculture, and who have acted in a very questionable manner in positions held by them?

We believe this series of questions will bring forth discussions in which every farmer and his family should be interested, and in which many will take a part. It is by open, free discussion that correct opinions are formed, and as knowledge is power, power implies wealth; therefore we believe every one who interests himself in these questions, and is able to discuss them calmly and reasonably, will gain an ascendancy over those who prefer darkness to light. Thus we trust if you do not take an active part in the discussions verbally or by letter, you will find hints and helps that may and will do you good in the remarks that will follow relative to the above questions. And as this journal is for farmers to talk to farmers, each one has an opportunity to add some facts or suggestions of utility that may be of benefit to his fellow toilers. Ask yourself the questions—Is there not some good, useful hint or suggestion that I can give? Shall I still hide my light under a bushel? Have I not some talent hid away? Let us be up and doing.

On the Wing.

MANITOBA AND THE FAR WEST.

Our old subscribers will remember the description we gave of Manitoba when we visited it three years ago last June. Many were vexed because we gave a truthful description of what we saw. Some men, even in high positions, declared our accounts were false, while at the same time they knew they were stating untruths. Mr. W. Prittie, the Emigration Agent at that time, informed us that some of the Winnipeggers were so mad about it that they declared they would kill us if we went there again. We sent word by Mr. Prittie that we should give them a chance when we got ready, but fear would not intimidate us from doing our duty. An opportunity occurred for us to take another trip there in August last in connection with the Press Association. The excursion was brought about at the instigation of Mr. Leonard, agent for the Credit Valley Railroad. That gentleman put himself in communication with the Michigan Southern, the Chicago and Rock Island, the Albert Lea, the Northern Pacific and Canada Pacific Railroads, all of which consented to draw our Pullman cars over their lines free of cost. The Association hired two Pullman cars, paying that company full rates for them, but we all had our beds in them when we preferred them to hotels. Thus we had a very cheap, long and pleasant trip. As the members of the press generally know how to make themselves agreeable, and were out for a holiday, with the aid of singing, card-playing, etc., most of the party had a very happy time. There were several ladies with us. Their presence always tends to refine and add to the pleasures of a journey, and they appeared to appreciate this trip as well as any of the sterner sex. Our first trip to Manitoba was made in an excursion train in the month of June. We found the country deluged and rain continually falling, mud of the most tenacious, treacherous kind, and water blocked all possibility of our safely inspecting the country. The present journey was arranged so as to pass over the different railroads that afforded the most pleasing sights, and to give them to us during daylight. The long, dreary, monotonous portions were swept over during the night, when we were snugly sleeping in our berths. To those that wish to go or return by the quickest, safest and most picturesque railroad, we would by all means recommend you to go by the Rock Island and the Albert Lea route. The first time we went to Winnipeg this route was not opened. We then returned via Duluth and by boat through lakes Superior and Huron, but the lake route takes much longer time, and excepting one month, namely, the last two weeks in July and the first two weeks in August, one is very liable to find great discomfort, both from dense cold fogs, and cold and disagreeable weather. The trip of 1882 was taken when the immense tracks of country were laden with one of the finest harvests of bright, golden grain, that has ever been seen, surpassing in brightness of straw and thinness of bran in the grain, anything we have ever seen in Europe or America. In addition to this the weather during the whole time could not have been more favourable. This was coupled with the utmost kindness and the most liberal and princely expenditures by the various corporations and Canada Pacific Railroad. Everything that man could desire to make the trip pleasant was prepared by man and Providence. Even a prairie thunderstorm and a prairie fire appeared to have been prepared for us. Thus with bands playing, carriages at each town or city to convey us through the grain fields, where the self-binding harvesters were going in rows gathering the immense crops; then driving us to banquet-

ing halls where the luxuries of Europe, California and the Prairie were combined to satiate the most fastidious appetites; and these banquets taking place in fine, large, spacious halls, decorated with flowers, even the choicest white dahlias, white roses and white lilies adorning our banquetting boards, with nearly all other choice flowers, and these having grown where, but a few years since, the buffalo and the Indian vied for the possession of the soil. Do you not think that Mr. Prittie was right when he said the Winnipeggers would kill us? We feel as if we had been killed. Time and space will not allow of more at present, but during the winter and in future numbers you may expect to hear more about this Great Northwest.

Read Minnie May's letter in this issue.

English Letter, No. 41.

Liverpool, Sept. 20th, 1882.

Disasters seem to fall thickly upon the agricultural interest in this country. Fine weather comes just in time to save a remnant of the hay crop, and to ripen the grain; but no sooner do the farmers begin to cut their wheat, barley and oats, than down again comes the rain with a strength and persistence worthy of a better cause than compassing the ruin of thousands of our yeomen, who were looking to a prosperous season this year as their last resort. For the last three weeks we have not had fully a fine day; and three hours of sunshine have been followed by twelve of rain. But if the magnificent hay crop has been three parts ruined, and the grain bids fair to follow suit, the many farmers would have had some compensation in the great abundance of green keep. As it is, however, they have now almost invariably thin stocks, and have no means at command to buy more, now that they could do so well with a large stock of cattle and sheep. How hardly some farmers are fixed will be shown by the following incident mentioned to me the other day by a friend: A farmer in Lincolnshire, who has nearly 1,000 acres in cultivation, is burdened by a clause in his lease forbidding him to sell any hay or straw off the place, unless he buys manure to an equal value. At his wits' end what to do, he has arranged with a large cattle dealer to take and "board," if I may use the expression, 100 head of cattle, accepting their manure as his reward for their keep. This, however, will enable him to sell a few hundred dollars worth of straw. Another large farmer in Cheshire, not knowing what to do with the surplus keep on his place, has arranged to take a quantity of sheep on no better terms.

Your Canadian farmers do not suffer alone for the want of agricultural laborers. Equal difficulty is experienced in Cheshire and other agricultural districts of this country in obtaining the services of harvest hands. The main reason assigned for this scarcity of laborers is that large numbers of the Irish agricultural classes have emigrated to America during the past season.

Another valuable shipment of sheep and stock is being made by the Beaver Line of steamers this week.

In regard to horses, quite a raid has been made by the Yankees in the districts where shire-bred stallions are raised, this being a class of animal that Americans hold to be much more useful on your side of the Atlantic than either Clydesdales or Percherons. They are becoming exceedingly scarce, however, and many purchasers have had to go to Wales to find the stock they needed. The Welsh horses are, in most respects, every bit as good as any of the other breeds, their only fault, in fact, being that they are somewhat undersized.

P. S.—The weather at last seems inclined to take up. A fortnight's fine weather now means a saving of millions of dollars to the English, Scotch and Irish farmers.

Manitoba Letter,

FROM OUR OWN CORRESPONDENT.

West Lynne, Sept. 6th, 1882.

Harvest is drawing rapidly to a close; in a few more days by far the largest crop ever reaped in the Province will be secured in fine condition, as no rain has fallen, with the exception of a slight shower during the past month, and the weather still continues fine and favorable for gathering the balance of the crops. The farmers at present are puzzled to know how to get their threshing done before cold weather in the fall, owing to the scarcity of men and threshing machines. With the aid of self-binders they were able to reap large crops with a few hands, but in threshing the same a number of men is required to perform it expeditiously, and in many places they are not to be obtained. A good many will be under the necessity of helping one another during the threshing season, and that will hinder them from getting their plowing done this fall ready for next season's crop. Mr. F. Bradle, of Emerson, has been collecting samples of grain, vegetables and other products of our country to send to England in charge of Alexander Begg, Esq., immigrant agent, C. P. R. company. The fine collections sent abroad showing the resources and capabilities of our Province, will doubtless exercise an important influence on immigration. The Provincial Agricultural and Industrial Society has recently been dissolved and a new Council of Agriculture formed, and the present officers have decided to hold no Provincial Exhibition in Manitoba this year, but offer for competition at this fall show of each electoral division agricultural society, six diplomas to be awarded by the directors of each society for whatever animals or articles they think fit. The directors of the Morris Electoral Division Agricultural Society have purchased a block of land in the vicinity of West Lynne, and intend erecting a building upon it at an early date for the use of the society. Prices for all kinds of farm produce are good, and the merchants are expecting a busy time this fall and winter.

By the Way.

The best advice we can give in fitting fields for wheat is to prepare the land thoroughly, and after it has been harrowed for the last time harrow it again.

We find that perfectly smooth tomatoes were sold to New York dealers last week for \$1.20 and \$1.50 per bushel, while the old lobed tomatoes were sold for \$1.00. Market gardeners must cultivate the smooth kinds.

It is a commonplace but important truth to which city and country gives expression when it is said that larger profits must come from more painstaking tillage of less land.

An example of the pleasing and profitable effect of "FIXING UP," consequent on a good wife's persuasions, and the growth of taste and thrift by feeding it, is cited in *Food and Health*:

"The old woman pestered me to death about the garden, and so I slicked up a little, and fixed about the house, and it looked so nice I went at the farm fences and the brush, and saved more manure, and kept killing the weeds, and the crops got better, and so I kept going on, and things do look pretty good now. Wife takes a paper and I take one, and I get time to read it, too, and I used to think I hadn't time for anything.' And so he ran on, seemingly much pleased with what he had done, and his life and his home without doubt the happier for it."

Don't forget this fall to plant in the "fence corners" pits of peaches and plums. You will be rewarded in a few years with plenty of fruit in these neglected places.

To have hyacinths, &c., bloom at Christmas, plant now in rich, light soil, and place in a dark, cool cellar until the pots are well filled with roots, then bring to a cool, light room and give plenty of water.

Learn your horses to walk fast.

The Farmer's Advocate Prize of \$100

Has this year been awarded by the Provincial Board of Agriculture and Arts, at the Provincial Exhibition, held in Kingston, to Thos. Guy & Son, of Sydenham Farm, Oshawa, Ont., for the best herd of five milch cows for general purposes and profit.

Mr. Guy has furnished the following statement to the Board, which will be of value to many of our readers. Three herds competed for this prize.

To Henry Wade, Esq., Secretary Provincial Association, Kingston:

SIR,—In presenting the following statement for the consideration of the judges appointed to award the prize given by the liberal editor of the FARMER'S ADVOCATE, we wish to state that we kept no regular daily account of the produce of our cows, but we frequently have tested their yield of milk by weight.

We find our best milk cows, when they first come in, to give from 40 to 50 lbs. of milk per day, and in some instances to exceed that quantity on grass alone. We think, therefore, from this, that we may safely estimate their average yield for the first three months, after calving, at 35 lbs. per day. For the next three months at 25 lbs., and for the third three months at 20 lbs. per day, or an average yield for nine months, or two hundred and seventy days, of 27 lbs. per day, making an aggregate of 7,290 lbs. of milk as the product of each cow for the year.

This quantity, if sold at three cents per quart, would realize \$109.35. Four of those cows produced calves which, from actual sales, at three months old, made \$50 each, which added to the amount from milk, gives \$159.35 as the product of each cow.

The same quantity of milk, if manufactured into cheese, allowing 10 lbs. of milk to a lb. of cheese, the figures would stand thus: 7,290 lbs. milk or 729 lbs. of cheese, at 9c, \$65.61. Add to this value of whey, say \$4, calf, \$50—total, \$119.61.

If made into butter, supposing 24 lbs. of milk gave one lb. of butter, gives 303½ lbs., which, averaging 18 cents per pound, amounts to \$54.66. To this add value of buttermilk and skim milk, say \$10 for the year, also calf, \$50: total \$114.66.

The above result gives \$4.85 less per cow for the year than that produced from cheese, and \$44.69 less than the milk.

In giving an account of the management, cost of keep, &c., we would say that on the approach of winter we stable our cattle at nights, and also the stormy days, but generally in winter they have the run of the barn yard, with a supply of fodder and water during the day. On coming into their stalls in the evening each animal is allowed half a bushel of turnips, or mangolds, and the same in the morning, with hay at night, and a feed of chop, such as ground oats and peas, with bran. We find this requisite to keep up the supply of milk.

We estimate the cost as follows for the six winter months:—

190 days, 1 bush. of roots per day, at 5c.	8 9 50
2,500 lbs. hay at \$8.00 per ton	10 00
½ ton bran, or its equivalent in chop.	5 00
Pasture in summer	8 00
Cost of calf to three months old	10 00
	\$42 50
	5

Cost of keep of 5 cows the year..... 213 50

Leaving a balance in favor of the herd

from the milk produced at 3c. per qt.	\$583 25
If from cheese at 9c.	385 55
If from butter at 18c.	367 50

We would further state that the herd shown by us are all from pure Ayrshires, bred by ourselves. That in addition to their milking qualities, they

are of good size; and when not in milk, if so desired, are easily fattened and converted into beef. That the beef of an Ayrshire animal is finer grained, better intermixed with lean, more juicy and palatable than that of most other cattle, especially those of other breeds.

That it has been found also by actual tests that the milk of an Ayrshire cow is richer in casein or cheese producing qualities, giving a much larger percentage of curd to a given quantity of milk than that of any other. They are also more easily obtained, as they are not held at such extravagant and fancy prices as some others, and therefore better adapted to the wants of the general public, as they are within the reach of any farmer of moderate means, rendering a quick and remunerative return for a given amount of outlay. That the herd we exhibit are all good breeders, having had calves regularly every year since they were two years old, and two of them in 1880 dropped twins. That three of the herd are in full milk at the present time, and the other two are due to calve in about a month; that they are all sound in every respect, easily kept, docile, and good specimens of their kind, having received first honors in their respective sections at previous Provincial and other exhibitions; and in addition to this, one of their number was awarded the prize of twenty dollars, offered by Mr. Lockie, at the late Industrial Exhibition at Toronto, for the best milch cow of any breed.

All of which is respectively submitted.

T. GUY & SON.

Sydenham Farm, Oshawa, Sept. 16, 1872.

PRIZE ESSAYS.

The following announcement was made of the awards for essays on the subjects announced by the Association:—

Essay on "The Household"—1st prize, David Nicoll, Catarqui; 2nd, John Clougher, Brampton.

Essay on "Manures"—1st prize, John Smith, of Raco.

The prize winners in the Farm Competition were as follows:—Gold medal, James Dickson, Tucker-smith, Huron Co.; first silver medal, Geo. Hyde, North Easthope, Perth Co.; second silver medal, Andrew Wachter, Brant, Bruce Co.; bronze medal, Wm. Esplin, Arran, Bruce Co.; bronze medal, Robt. Lime, Derby, Grey Co.; bronze medal, Jno. Varcoe, Colborne, Huron Co.; bronze medal, Alex. McLaren, Hilbert, Perth Co.; bronze medal, Wm. Elgie, Nichol, Wellington Co.; bronze medal, Jno. Ford, Artemesia, Grey Co.; bronze medal, Walter Sorby, Puslinch, Wellington Co.

Essay on the Most Economical Feeding and Best Cooking for Harvest Hands, with Bill of Fare.

No. 3.

SIR,—I crave your kind indulgence if I am rather too minute in details, in this my first attempt at writing an essay. My object is to make myself plainly understood. I am a farmer's daughter, my parents are both dead; I keep house for my brothers at the homestead; we keep three hired men during the summer months; my two brothers eat their meals with the men when no company is present. Circumstances have compelled me to practice the closest economy in every detail, and at the same time to have a tasty and well arranged table. In order to do this I vary my dishes as much as possible. The enclosed bill of fare is my actual experience in the last week of July, or the first part of August. I think if farmers' wives or daughters would give a little more attention to the manner in which they cook and serve their food, it would be much better for the working men, and more satisfactory, in a pecuniary sense, to themselves. Such is my humble opinion, based upon the closest observation, with a view to having the table look as tempting as possible with the least possible expense; of course, I have to regulate the time taken to cook the vegetables. I am guided by their advanced age or otherwise, as in cooking I

have to exercise my judgment. I have all my pots boiling, with a little salt in each for all vegetables. With my green peas I boil a sprig of mint; green beans I serve with a little white sauce; this is made of one cup of boiling water, ¼ cup of milk or large tablespoonful, a little salt, a small piece of butter. After the water is carefully pressed out of them in the collander I put them in the dishes; I pour over sauce. The same way I cook young beet roots and new potatoes, omitting the sauce. If I have not meat and gravy, all are baked. This I find is much improved by being boiled quickly and served hot; my gravies I make by pouring some of the fat off; if the meat is roasted or fried fresh, I season with a little salt, pepper, a little flour, and boiling it a little, flavor it to my taste by a teaspoonful of last year's tomato sauce, taking care not to have it pasty at all, or too thick. My drippings I clarify by boiling in hot water, after skimming it off the pots and pouring it into cold water, skimming it again and keeping it in a cool place. By this process I save my butter and lard, besides having quite as nice pie-crusts and biscuits. I find that by boiling either ham or bacon it goes further and they like it just as well if not better than always frying. The apples I dry for our summer use are good cooking fall apples, that require no sugar unless cooked with rhubarb or green berries. In cooking berries, rhubarb or green apples or cherries for present use, I put in the required quantity of sugar when they are cooking, and always serve cold. This takes off the sour taste, and much less sugar is needed. As we send our milk to the factory, we only keep at home what will be needed for the day. If two quarts or three pints is kept I put it in three different dishes, if used for a pudding or custard. By this way I have more cream to spare for tea, and to serve with the pudding. For one cream pitcher full of cream, or for tea with milk, I put one tablespoonful of nice brown sugar, stirring well through the cream, for by this way less will do. I buy the uncolored Japan and black tea, keeping them separate. For one meal I use one large teaspoonful of Japan; this I put in the steeper with a little cold water on the stove, allowing it to steep 15 or 20 minutes; in the tea pot I put one teaspoonful of black tea, allowing to infuse for 8 or 10 minutes in boiling water; this will give each two or three cups of very good tea; when a little cream is used it looks very rich. When coffee is used I take three teaspoonfuls of the Java coffee, 1½ teaspoonfuls of chicory, pouring over it boiling water, let stand on the stove for a short time scalding. I take two tablespoonfuls of sugar with a pint of the last night's milk with the cream stirred into it, or new milk, then I let the whole boil a few seconds, when it is fit for use, and quite sweet enough for any taste, and will give each person two or three cups of very nice coffee. My vinegar is made of cider; I keep a stone jar near the stove all the time, and put with it all the cold tea I have. It is very wholesome and good. My bread I make twice each week; a little brown and white each time. I do this in order to have the white dough for buns. In the bill of fare I enclose I mention: 1 fore quarter of veal; mutton will do quite as well—I am guided by the price; the calf's heart and pluck. If not to be had I have fish for the day, fried with a little parsley and bread crumbs. The barley is the common pot-barley; one pound will do for three dinners; it is five cents per pound. The lettuce, onions, cucumbers and radishes I have, when prepared for the table, put in a little salt and water; it gives them a fresh appearance and crisp taste. This with a clean tablecloth, clean glasses for water, clean knives and forks, I am not ashamed of my table. The cider apple sauce is made from sweet cider and Tallman sweet apples in the fall. The apples are boiled until quite soft in cider, both are put over the stove at once; when sufficiently cooked it is sealed when hot, in gems or jars without sugar, and is very delicious for summer use. Now, Mr. Editor, I have endeavored to give you a faithful description of my method of cooking for our own men and hired help during the harvest, and I find that by strictly following these details in cooking, any little trouble and extra time is more than repaid. By using every kind of vegetables in its season we save it in meat, which is now a most expensive article of diet. Fruit I think quite indispensable for the hot weather. I have never found it a saving to be confined to one kind of diet. I would avoid when possible a sameness in cooking, even in the same articles. Few people have had the same reason to study economy that I have, and at the same time to have a respectable looking table. By following out this programme, and by the exercise of a little judgment, I flatter myself that our table

looks as well, and gives as good satisfaction, and our expenses are smaller than many of our neighbors. Hoping, Mr. Editor, that my very long article will meet the needed requirement, and hoping you will kindly excuse all mistakes and give my experience a patient consideration:

Flour well beaten together with a little salt and pepper, fried until a light brown with a little dripping in the frying pan. For dinner, a piece of veal roasted, potatoes, green peas, salad of cucumbers, rice pudding made of 1 cup of washed rice put into a little over a quart of new milk, a little salt; the uncooked rice put into the milk will cook in $\frac{3}{4}$ of an hour; serve with sweetened cream, have your oven not over hot. For tea, a dish of cherries, pitted, or berries, a plate of tartlets made of cider apple sauce, a plate of drop cakes made of 1 egg, $\frac{1}{2}$ teaspoonful of baking powder, a cup of sweet milk, $1\frac{1}{2}$ spoonfuls, flour to make a stiff batter, a little shortening; this with a plate of last October cheese, good bread and butter.

Monday: For breakfast, a plate of porridge made of oat meal soaked in water one night, a plate of cold meat, the left-over potatoes fried, bread and butter, tea. For dinner, I boil a piece of thin bacon with young carrots and beans, a pie made of green apples, in a deep dish with or without milk. For tea, a plate of butter-milk biscuits, hot; a custard, a pie made of 2 eggs, 1 large cup of milk, a little sugar, short crust, eaten cold with a dish of dried apple sauce.

Tuesday: For breakfast, scalded milk over small pieces of bread, little salt; cold bacon, the biscuits made warm in oven, tea, bread and butter. For dinner the rest of the veal is stewed until quite tender in a deep lined pie dish, a nice, well seasoned gravy poured over the meat, reserving a part to serve over the vegetables, the pie-crust about half an inch thick, baked in a quick oven; potatoes and peas. Desert, boiled barley with sweetened milk, salad of radishes and onions. For tea a dish of cider apple sauce, a cherry pie, a plate of cheese.

Wednesday: Breakfast, two eggs each, a plate of porridge, a plate of biscuits, tea, bread and butter. For dinner, boiled meat, beans and cabbage, stewed green tomatoes with bread crumbs, 1 tablespoonful of vinegar, pepper, salt and a little butter. For tea, dried apple pie, a plate of buns, cheese, bread and butter, tea.

Thursday: For breakfast, I have minced up all the broken meat, 2 eggs, $1\frac{1}{2}$ cups of milk, 3 tablespoonfuls of flour, pepper, salt, sage made into an omelet, a nice dish; porridge, bread and butter, tea. For dinner, cold boiled meat, potatoes, green peas, onions and lettuce for salad, a steamed roly-poly pudding made of cider apple sauce, served with sweetened sauce. For tea, raspberry pie, a custard made from 2 eggs, 1 quart of scalded good milk, 1 tablespoonful of sugar, 2 of corn-starch or flour, well boiled, served in cups or glasses when cold; a plate of radishes, bread and butter, tea.

Friday: For breakfast, porridge again, pan-cakes made from butter-milk and sweet milk, one egg, a little soda, fried a light brown, served with molasses or syrup; a plate of eggs, bread and butter, tea. For dinner, a plate of fried calf's liver with the fattest piece of bacon and fried onions, carrots and potatoes, salad of sliced beets with vinegar, pie of green apples. For tea, a dish of green apple sauce or cherries, plate of buns, a pie made of apple sauce, cider apple sauce, bread and butter, tea, a plate of onions or radishes.

Saturday: For breakfast, cold meat, potatoes, scalded milk thickened with flour, a little salt; bread, butter and tea.

No. 4.

THE MOST SUITABLE AND ECONOMICAL FEELING AND BEST COOKING FOR HARVEST HANDS, WITH BILL OF FARE FOR ONE WEEK.

SIR,—This is a subject of importance to every farmer's wife and daughter, so much is comprised in it. It is rather a difficult matter to decide what is the most suitable feeding; for where there are many men there is a diversity of taste, some require a great deal of meat, others very little; some prefer milk, others will not touch it; the same with vegetables, &c. Some men eat very little breakfast, and require a lunch; others can eat a hearty breakfast and work on until dinner-time.

Our plan, which we find successful and agreeable to all parties, during haying and harvest, is, to have breakfast at six, dinner at eleven, and tea between four and five. When the men are hauling

in grain late, we give them a supper at nine. By this plan the toilsome task of preparing and sending lunch is avoided, time is saved on both sides, and the meals enjoyed more. Punctuality is the most important requisite. We never keep the men waiting for a meal; we are invariably ready for them, and if sometimes they are a little behind time (which is unavoidable), the dinner can afford to wait; if they are working at a distance from the house we send tea to them. For drinking in the field, water with oatmeal in it is both nourishing and cooling, also iced milk (where ice is to be had). Any summer drink is preferable to liquor, which is heating and dangerous, both mentally and physically.

Raspberry vinegar, boiled cider, and all these things, that cost very little besides labor, should be stored away in the fall, ready for summer use. Fresh cider, if heated and slightly boiled, then sealed air-tight in bottles, will taste in the summer like new cider, and is very refreshing. An excellent drink can also be made out of dandelions, a sort of beer, wholesome and pleasant; many things produced on a farm can be utilized in various ways. We find our plan work well, and notice when we have new hands at any time of the year, even if they do not eat well when they first come, their appetites improve—regularity and good cooking making a very perceptible improvement—they invariably gain in health and appearance.

As to a bill of fare, people must be regulated by their means pretty much. In country places there cannot be much variety in the way of meat, as it is not always convenient to get it, in places remote from towns or railways. Pork being the most available kind, it is used to excess, and is not desirable nor beneficial when placed upon the table morning, noon, and night. Last summer we had meat sent us from Toronto, twice a week, by stage. We got excellent meat, three cents a pound less than the butcher in the adjoining village charged for inferior meat. We found it paid us better to get it in that way during the warm season. Our bill of fare is pretty much as follows:—For breakfast we have oatmeal porridge and milk, cold meat or fried bacon, bread and butter, sometimes fried potatoes, tea or coffee. We vary this occasionally by having a potato cake, muffins, pan-cakes, or anything of that sort. For dinner, fresh meat of any kind, sometimes soup, or stew, or roast, varied occasionally with fried or cold ham; any vegetables that are in season, peas, beans, and all those things that take time to prepare, we get ready the night before; puddings or pies generally, but when there is good fresh meat and gravy, and plenty of vegetables, puddings or pies are not required; this is why it is an advantage to have fresh meat. Much pork, sweet cakes and tarts are unwholesome and pernicious. We always, of course, have bread and butter, and tea or milk, with dinner. For tea, plenty of fruit stewed, bread and butter, pies, and plain cakes, varied by Johnny cake, or anything of that kind, sometimes cheese. People, of course, can exercise their own judgment, I merely give our experience. I shall be glad to hear the opinions of others; these things tend to mutual improvement.

The custom of using a great deal of pork prevents many farmers' wives and daughters knowing how to cook different kinds of fresh meat properly, but now there are so many good books published on cookery, that any woman of ordinary intelligence can soon learn. A shank of beef, costing only thirty-five or forty cents, can be boiled, and the meat potted for present use; in cool weather it is desirable and always handy. Fish is a good thing to have once a week in summer, and if fresh fish cannot be obtained easily, canned fish can be bought cheap and kept for use when required. There are so many cheap and excellent articles to be obtained, and the farmer who has so much within his own reach can live better than any other class, with little expense besides labor. I am convinced that the too frequent use of pork, having sweet cakes, etc., and not enough vegetables, besides bolting the food, and sometimes working too long hours, and going too long without eating, is the great cause of dyspepsia amongst farmers, a class of people who should never be troubled with such a complaint. And how is it that so many country women and girls are sallow, have sluggish livers, &c.? It is because they are everlastingly cooking over hot stoves, and making things both indigestible and unnecessary. Let them work in the gardens more, raise plenty of fruit and vegetables, cultivate flowers, live and dress plainer. It is excessively hard work and very wearing for girls on farms to try to dress and live in the style of people who have little else to

do. In summer it is absolutely necessary to pay entire attention to preparing meals for the men and the family, besides butter making, bread making, and numberless jobs that our city friends know nothing about. It is foolish to invite them out and slave for them at such a time. Many farmers wives and daughters do it, and it is more wearing attending to their visitors than doing the ordinary farm work. Overwork has a great deal to do with dyspepsia. There is no one in the world with better facilities for having comfort and luxuries than the farmer, and I have been surprised when at the houses of wealthy farmers, to see what inconveniences both men and women work with. Things that could be procured at a trifling expense, and save labor and time, will be dispensed with, and money spent where it is not needed. I do not wonder sometimes at young people wanting to quit farming, when I see how they have been brought up; nothing pleasant or attractive about their homes, rough men, rough living, work the first, last, and only consideration. But the farmers have made considerable strides in civilization, and enjoy themselves more, and read more than formerly, and there are many beautiful homes throughout the Province. I am digressing from my subject. I do not know whether I have said what was required in the best way of cooking for harvest hands. I have given my experience. I consider regularity in meals one feature in economy, as no time is lost and nothing wasted by being kept waiting. It is also economy to cook good, nutritious food, and whatever is conducive to health and strength. It is suitable for the men to be served and waited upon properly, and punctually, not left to themselves to stretch over, and eat in the style of "every man for himself," like the animals. The farmer should be with them; if possible, when he is working along with them, if not, the principal man can take his place—this preserves order and decency. I have seen meals set up sufficient to turn one against eating. Have things plain, clean, and comfortable. I know it is often difficult to get help, and women are overworked and wearied, still with early rising and management, very much can be accomplished, and it is to be hoped the young people will not desert the farms, but remain, and try to improve and elevate the noblest branch of labor in the world.

Culture of the Black Walnut.

W. H. Ragan, Secretary of the Indiana Horticultural Society, gives the following directions for cultivating the black walnut:—

"The ground should be prepared in the best manner in the autumn. Furrow the ground off each way as for corn, except that the rows should be seven feet apart. Take the nuts, fresh from the tree, and plant two at each crossing. They are to be covered shallow, just enough to hide them. So much for planting. Then next spring furrow the seven-foot space intermediate between the rows, and plant with corn or potatoes. The corn and young trees will all be cultivated alike, and the young trees must be kept clean. The second spring thin out the trees to one in a hill. The thinning will fill any vacant spaces where needed. Corn or potatoes may be planted the second, or even the third year, and after that the trees must be cultivated and kept clean until they occupy the whole ground so fully as to keep down by their shade all weeds and grass. Standing so near as seven feet, the trees will not require trimming, but will thus trim themselves. But when they begin to suffer from crowding, take out every alternate tree in each row, and in a few years another thinning may be made by taking out alternate trees in the rows at right angles to the first, leaving them fourteen feet each way. If the trees are to stand until they become quite large, additional thinning may be necessary. But they should always be thick enough to obviate the side trimming of branches. The thinnings will always possess considerable value."

W. D. Philbrick, in the *New England Farmer*, says: "Apples need to be kept as cool as possible without freezing; they will endure a little frost much better than too warm a temperature, 28 to 34 degrees is best; when it rises above 40 degrees they don't keep well, and a temperature over 50 degrees will speedily spoil them. Hence to keep russet apples till late in May, they should be kept in a tight cellar and aired only at night when the temperature is near or below the freezing point. I have seen them kept in this way in excellent order till the middle of June."

The State of Agriculture in England.

BY PROF. J. P. SHELDON.

There are symptoms now of better times. The seasons seem to be mending their manners, for on the whole this year has been better than last, as last was better than several previous ones, in the weather department. We are taking heart against foreign competition, and no longer consider it is going to do us the harm it promised to do; this is because American and Canadian beef is coming in very gingerly this year, no longer flooding our markets as it threatened to do. Our crops are improving coincidentally with the weather, and the fertility and condition of the land are clearly being restored from the effects of the last five or six years' drenching with rain. Cattle are healthier than they were a year ago, and sheep have forgotten to go rotten. Prices of all kinds of bovine and ovine stock are far better than they were a year ago. Beef is worth ninepence and mutton elevenpence a pound; that is, the farmers are making these prices of the best qualities of both. Cheese is worth sevenpence and butter seventeenpence a pound—again to the farmer.

The marked improvement that has taken place in the condition of things in general in the agricultural world, goes a long way to prove that it is almost wholly to the wet and cold seasons that we must attribute the long series of disasters that have befallen farmers in this country. It is now a settled conviction amongst us that with a tolerable climate, we can meet not unsuccessfully whatever foreign competition may come against us. Our chief losses are the sequel of the reduced fertility and stock-carrying capacity of the land, and of the ruined condition of the cereal crops on account of too much rain. Forage crops have been bulky enough of late years, and by accident some of them have been well harvested; there has been for the most part plenty of grass in the pastures, and the root crops have been fairly abundant; there has, in fact, been bulk enough of all kinds of stuff that the soil will throw up, and farmers have farmed their land as well as the weather would let them all the while; but we have had to contend against the inferior quality of everything. Cattle and sheep did not thrive, and cows milked poorly, while their milk yielded badly, on the pastures; and they could scarcely keep body and soul together on forage in the winter. All this was owing to want of sun and excess of rain, both of which militated against vigour and condition both in the animal and vegetable world.

But there are symptoms of better times. The quality of the crops is greatly improved. The aqueous grasses in the pastures are giving place to better ones once more. There is a good profit on grazing this year, and dairy-farming promises to pay as it has not done since '75 or '6. Stock-raising has paid tolerably well all along, where men went in for a good stamp, but now it is paying, and for years to come will pay, exceedingly well. The number of cattle goes on diminishing in the country, and the same may be said of sheep; yet our population goes on increasing, and must be fed from somewhere; we may look, therefore, for large profits where men raise their own cattle and sheep and fatten them.

The capital of farmers has become much smaller, and great numbers are in very low water, while not a few have been ruined outright. Credit, however, is reviving with the promise of better seasons, and it is to be hoped that due consideration and assistance will enable men to get their heads well above water once more. The worst, we may say, is over. The disease, as it were, is gone, and what the patient wants now is strength. This can only come of good nursing and with the lapse of time. Given these things, and a sound constitution, the recovery will be satisfactory.

It is well for this country that free trade has enabled us to supply the people with food at a cheap rate. But for this we should have had riots

and bloodshed in the land; for the country has been passing through a crisis that would easily have bred a revolution half a century ago. And it has passed through it with exemplary patience and silence. I think you Canadians have reason to be proud of your old mother country, who can still stand up under such a strain as that of our recent agricultural depression. "There is life in the old dog yet," and "while there is life there is hope!"

Feeding Cottonseed Meal.

About six or seven years ago I began to feed cottonseed meal to my cows, and have continued its use ever since. My cows are kept for making butter, and it is necessary to be careful of the effect of the feed both upon the quality of the butter and upon the health of the cows, so that it required a long time and careful noting of effects to learn what I have discovered in regard to this feed. In the first place it may be said that it cannot be compared with corn or any other feed, excepting for the purpose of estimating or fixing a mixed ration for an animal; just as we cannot compare beef with potatoes, or butter with bread, excepting so far as to proportion the quantity of one to be used with the other in our ordinary diet. No person can consume beefsteak or essence of beef solely, and remain healthy; and no more can one feed only cottonseed meal and keep his stock in good order, excepting for a short time when finishing them for the butcher. This will be obvious when we consider the nature of this highly concentrated food.

Although cottonseed meal contains a great deal more nutritive matters than corn, it cannot therefore be used in place of it with corresponding advantage. In estimating fat as nutriment, in place of starch, gum, &c., one equivalent of fat is held to be equal to 2½ of starch, so that we have—
Cottonseed meal equals 91.3 per cent. of nutritive equivalents.
Corn meal equals 82.7 per cent. of nutritive equivalents.

But we must not lose sight of the fact that cottonseed contains nearly five times as much albuminoids as corn meal, and right there is its most important characteristic to the feeder, because therein it becomes analogous to the flesh meat of human food.

Nitrogen cannot be used in the animal economy in anything like the quantities in which carbon can, because a very large portion of carbon is needed for the sustenance of vital heat; and if nitrogenous food is too largely given, it unduly enriches the blood, and produces an excessive strain upon those organs whose office is to remove excess of nitrogen from the system—chiefly the kidneys. In feeding cows too largely with cottonseed meal, then, we might expect the circulation to be unduly stimulated; and this is precisely what happens, and it appears very quickly in an increase of milk and cream, and, if anything goes wrong, in an attack of garget. In pigs and horses it appears as congestion of the brain, which we call staggers. Now I know this, because I have experienced it, and therefore maintain that for horses and pigs cottonseed meal is a most dangerous food, and should never be given; besides, they do not want it, having other feeds that are better. For cows and sheep it is the most valuable feeding stuff we possess, if given in moderation, just as I find a beefsteak is the most valuable food for a man; but it will not do to consume it voraciously, or all the time, to the exclusion of starchy food, as bread, potatoes, rice, &c.

After several years' feeding, I have found one quart of cottonseed meal—free from husk—one quart of corn meal, and one of bran, to make the best and safest feed-ration, given twice daily, for a cow in full milk. The husk of cottonseed is indigestible, and will make trouble very surely if fed to a cow. When I say bran, I mean either rye or wheat, but I like rye best. The effect of cottonseed on the butter is to harden it, to give it a good texture, and a fine, nutty flavor. Linseed meal has quite the opposite effect, and palm-nut meal will make the butter soft and greasy too, although it largely increases the butter. But it is necessary to watch a cow very closely when feeding cottonseed, and never to give any of it within two months before calving, or within ten days afterwards, and then begin gradually. Two ounces a day is quite enough for a calf under six months old, and indeed I have never yet found it of any advantage to a calf, while it can have corn and oats and bran; I avoid using it for any animals except cows, or for fattening a beef animal.—[H. S. in Country Gentleman.]

Hints and Helps.

Burying Cabbage.

As the season is arriving for the gathering of cabbage, a few hints on the method of burying them whole may be of benefit to our readers. Cabbage should be gathered in November. They are not injured by being frozen a number of times; on the contrary their flavor seems to be much improved thereby. The manner in which they are covered is shown in figures 1 and 2. Select a dry spot of ground (if it is underdrained so much the better) on which water will not stand during winter. This selected, dig a trench two feet wide

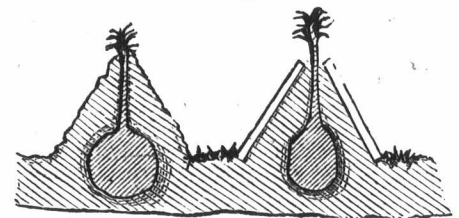
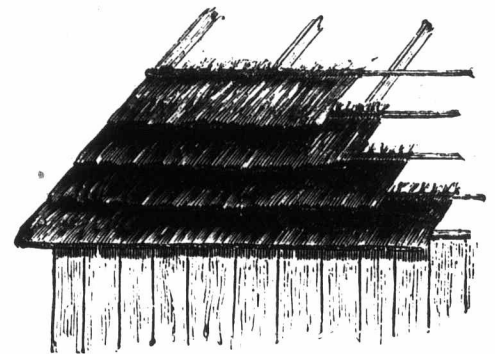


FIG. 1. FIG. 2.

and six inches in depth, in which scatter straw (rye or wheat is best) three inches in depth, on which stand the cabbage, top downward, 2 or 3 inches apart, until the trench is full, when straw is scattered around the head and part of the stem. This done, cover with earth from 4 to 8 inches in depth, according to the exposure. By placing boards at the side, as shown in figure 2, rain will be prevented from washing away the dirt; or by packing the dirt by striking upon it with the shovel blade the same point will be gained. Break off a number of the outside leaves and free the roots from dirt before burying.

How to Thatch Roofs.

Rye straw threshed with a flail and kept straight, with the short or broken straw raked out, is the best material to use; but good wheat or even oat straw will make a good roof. The roof is made ready for thatching by nailing strips of board, say one by two inches, across the rafters, putting them a foot apart. The pitch should be steep, say a "third pitch," in builders' terms, to ensure a water-proof and durable roof. The straw should be cut to a uniform length, and care taken to have it straight and all right. The sketch shows how the roof is prepared for the straw, and the manner the courses are laid. For convenience in handling I prefer laying the straw in bundles

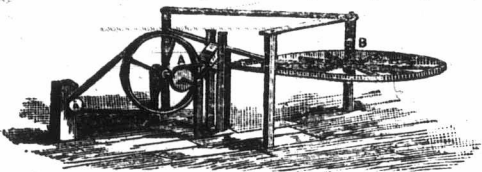


that will average about six inches in thickness. The band should be quite close to the upper end, the one which is fastened to the cross strip. The best way to fasten the bundles is to take a few straws from each bundle, after they are laid on the cross strips, and pass them over the next one laid and under the strip, and over again, then adding more straw from the bundle just tied. In this way a common rope is made until the end of the course is reached. In thatching, nail or spike the slats or laths to the rafters about one foot apart, allowing the thatch to be about three feet long from the band, more or less, according to the length of the straw.

A Novel Horse Power.

Among recent inventions we find an improved horse power that is simple, durable, and cheaply constructed, and has less friction than machines now in use. The device is shown in the annexed engraving, in which A is a horizontal shaft journaled in two posts, and B is a vertical king post to which the main power wheel is secured, and it is revolved by horses attached

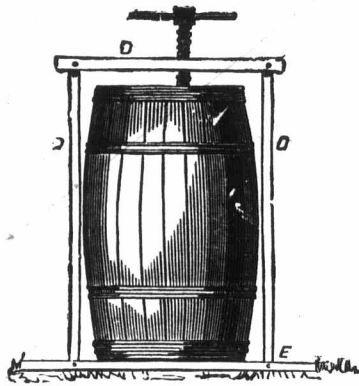
to a lever secured to the post below the power wheel. Upon the shaft, A, are placed two pulleys,



one larger than the other, and it receives its motion from the main power wheel attached to the post, B, by a belt a, that passes over the small pulley and communicates it to the ginning or threshing machine, by means of a belt passing over the larger pulley and a small pulley on the machine. The belt is guided from the power wheel to and over the small pulley on the shaft, A, by one horizontal and two vertical rollers, over and between which it passes, and the belt is kept tightened by a swinging belt tightener, which is provided where it comes in contact with the belt with a roller.

Barreling Apples.

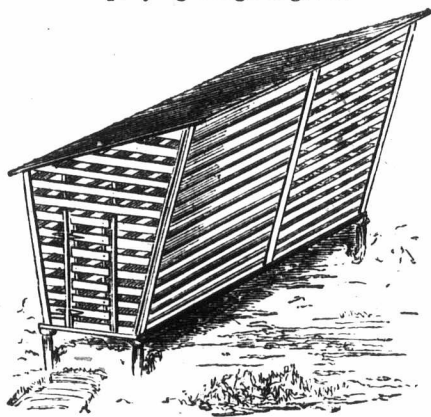
The common and most successful mode of gathering apples practised is, when apples are intended for fall markets, to carefully pick them from the tree by hand before they are injured by frosts; then they are emptied in a pile under a tree, and assorted and barreled up the same day, or assorted and placed in barrels immediately after gathering, the barrel being left unheaded for a day or more,



simply placing the head over them, keeping out dew and sunshine. There are various modes of barreling apples, and the one which we present to our readers is considered good. D. D. D. is a frame of sufficient dimensions to admit the barrel which stands upon the platform E. The pressing is performed by a screw, either iron or wooden, passing through the upper and horizontal part of frame

Cheap Corn Crib.

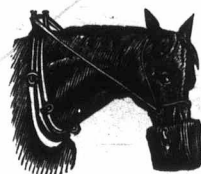
There are many farmers who follow a mixed husbandry, and who raise comparatively small quantities of corn, who cannot afford the expense of putting up very costly structures. For the benefit of such the accompanying design is given.



This is an excellent crib. The cells are 4x6 inches, framed; if only a small crib is needed, it will only be necessary to bore 2 inch holes at each corner and one intermediate, and insert sharp ended sticks 3 inches square, to which secure slats horizontally three-quarters of an inch apart. As this structure has but one door it is best to divide the room into two parts, the best or sound corn to be put in the rear compartment, and the poor corn in front where it may be first fed out.

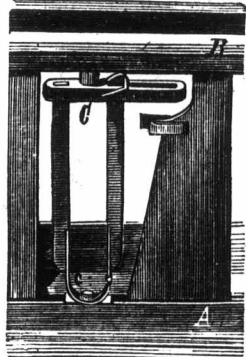
Feed Bag for Horses.

Mr. Frank Wheaton, of Brooklyn, E. D., N. Y., has patented an improvement in feed bags for horses, the object of which is to provide a device for suspending a feed bag from the head stall of a horse's harness, so made that the horse can reach the bottom of the bag without being chafed by the straps supporting the bag. The device is shown in the annexed drawing. The head stall, provided with a nose band, has a ring attached to each end, and a leather disk is also attached at the same place on the inner surface, the rings resting on the disk and the disk resting on the sides of the horse's head. A ring is fastened to each side of the feed bag, and to these rings the ends of a strap or a rope are attached, that passes from the outside to the inside through slots in the bags above the loop, and then passes through one of the rings on the end of the head stall, around the upper ends of the hames, through the loop of the other end of the head stall, and to the ring on the other side of the feed bag. The feed bag is thus suspended from the hames by the strap, and if the horse moves his head downward the bag will be drawn upward, and the horse can get to the bottom of the bag, and as soon as the horse raises its head the bag will descend, and the horse can take its nose out of the bag as horses like to do when feeding. In this device the strap is not bent at acute angles, but at every point at an obtuse angle, whereby the friction is materially diminished and the strap is not apt to crack or break. The disks also prevent chaffing the sides of the horse's head.



An Improved Cattle Stanchion.

Among recent inventions we find a useful improvement in cattle stanchions, by which both bars of the stanchions are free to move with every motion of the neck and shoulders of the animal, thus adding greatly to the ease and comfort of the animal and obviating altogether the injurious cramping and confinement incident to stanchions of ordinary construction. In the annexed cut, A is the lower, and B the upper beam of the stanchion frame. To and between these beams is pivoted the stanchion, which is formed of a movable stanchion bar that is hinged at its lower end to the curved plate C, and its upper end moves in a slot formed through the long arm of the cross



piece, C, and the stanchion bar that is secured at its lower end to the curved plate and its upper end to the short arm of the crosspiece. When the stanchion is open it is kept in proper position by a keeper placed on an upright board, and when the animal is in the stanchion, a hinged bale attached to the plate C, drops over the upper end of the bar, which is made to reach above the plate for that purpose.

Potatoes, when dug in an unripe state, may be at times watery and not fit to eat, but if spread as thinly as possible in a dry, airy place, they will in time become as mealy as if left to ripen in the ground.—[Mark Lane Express.

Experienced fence builders and others who use wood in the rough for posts, ties, etc., unite in the opinion that timber cut in summer, while the bark will yet peel freely, is much more durable than that felled during winter. There is less of soluble sap in the trunk and limbs to absorb moisture, ferment, and induce decay.

"I must give THE FARMER'S ADVOCATE credit for being the best advertising medium I have tried, and I have advertised in the National Live Stock Journal and leading papers. I have received more enquiries from the little card in your paper than from all other advertising I have ever done"—JOHN DRYDEN, M. P. P., President of the B. A. Shorthorn Ass'n, Brooklyn, Ont.

Professor C. E. Goessman, at the Science Congress at Montreal, reported in reference to peach yellows that the disease at the Massachusetts Agricultural College was far worse in trees on poor light soil; where the soil was strong it obtained little hold. He thinks—and Professors Penhollow and Halstead agreed—that the fungi seen in the cells is a result of the disease, not a cause. It seems evident from the surroundings that there is some lack in the soil which gave rise to the enfeebled growth. Professor Maynard in 1878 commenced to treat the soil where the diseased trees were to a superphosphate, adding three or four pounds of chloride of potassium to each tree. Soon the trees improved and now they are in good health. Professor Penhollow and the writer both made chemical analyses of the sound and diseased wood. There was a lack of potash in the latter and an excess of starch in the cells. The cause of the disease seems to be improper assimilation, because of impoverished or improper soil.

Garden and Orchard.

Flowers and Plants at the Western Fair.

Notwithstanding the lateness of the season the display in this department was exceedingly fine, particularly of Dahlias, Gladiolus, Verbenas and bouquets of cut flowers, the portion of the vast building devoted to this exhibit being well filled with choice varieties of both greenhouse, outdoor plants and native wild flowers. This part of the Fair proved very attractive, and was extensively patronized. Indeed, this exhibit was well worthy of any first-class Horticultural Society, and illustrates our continual progress in the cultivation of the beautiful.

FRUIT AND VEGETABLES.

The show of apples was inferior to those of former years. This we may attribute to the unfavorable season. Pears were very good. There were some good specimens of plums, quinces, peaches, &c., but the lateness of the season prevented any great display of fruit. Vegetables in all classes were particularly fine. The enormous size and quality of cabbages and cauliflowers exhibited proved that there is nothing to prevent their successful cultivation in this country. Table corn, onions, squash, tomatoes, capsicums, and celery were all first-class. Potatoes in their different varieties were well represented, being large, clean and perfectly sound. Mangolds, Swedes and other field turnips, carrots and beets were shown of enormous size. Taken altogether it would be difficult to excel the display in this department. The dairy display was very large and highly commended, and great interest manifested in this department.

The duty of fumigating green-houses is such an unpleasant one that it is often neglected to the injury of the plants. A French horticulturist has made a discovery which will render it unnecessary to use smoke for the purpose. He finds that the vapour from boiling tobacco juice is as efficacious as are the fumes from the burning weed. The method adopted is simply to mix a small quantity of juice in water and evaporate the whole. The vapour, it is said, kills all the insects in the house. Could not the same plan be adopted against house-flies and mosquitoes? Its recommendation would be its cheapness, for the juice could be expressed from the refuse tobacco which is now thrown away at the factories.

RABBITS IN ORCHARDS.—A correspondent of the *Gardener's Monthly* says:—A few years ago I was greatly annoyed with rabbits barking my young apple trees. To prevent their depredations I made ropes of hay. These I wound around the trunk of the trees from the roots to the first limbs, in the fall. I left them on all the following summer, and when I removed them in the fall I found the bark fresh and healthy and free from blotches. I repeated the operation for some years and in consequence have healthy, vigorous trees, free from fungus and all disease, and yielding an abundance of fruit. The process is not only good for protecting the trees from rabbits, but also to protect the bark from the cold winds of winter, and the hot sun in summer.

Raspberries.

THE GREGG.

We are indebted to Mr. Roe, of Cornwall-on-Hudson, N. Y., for the accompanying illustrations. We wish our readers to direct their attention more to provide delicacies for their tables than they have been in the habit of doing. Now that so very many own improved farms, it is well that our families should enjoy the luxuries of good vegetable and fruit gardens. Canada is a better apple growing country than almost any land we know of; but we need a variety of fruit, a better supply of small fruit for our own tables as well as for market. Raspberries, more than any other, are a very sure crop with due care. They bloom later than apples, and hence the blossoms may be safe from the frost that nips the tender bloom of the larger fruit. Early in this month Blackcap Raspberries may still be planted if it be done carefully, and the crown of the plant covered with earth to the depth of about three inches and protected from the winter: uncover in the spring. The ground, of course, should be in good tilth. The usual time for planting is spring, but our fall planting of trees and shrubs has never been a failure. The Gregg is one of the best.

THE CUTHBERT.

This superb variety seems to be more than fulfilling the hopes of its most sanguine friends. I have five plantations of the Cuthbert and they stood the last severe winter without the slightest injury. I have also been informed that they were uninjured in one locality where the thermometer sank forty degrees below zero. Still I claim that there are no perfectly hardy raspberries and that some winters are fatal even to the Turner. The Cuthbert, however, has proved itself one of the hardiest we have, and was loaded with fruit. There is no variety on my place that promises better. The fruit will average as large as the Antwerp, as the berries do not so diminish in size after the first pickings. It should not be planted on too rich or moist land, as it is a rampant grower and the wood does not sufficiently ripen if the soil is wet, or too strong. Cutting the canes back in Spring one-third greatly increases the size of the berries, but it also makes them later in ripening.

The Agricultural Gazette, London, Eng., in a recent issue, says: "The FARMER'S ADVOCATE is a very reliable monthly, published in the interest not of land speculators, but of its readers." Quite correct, nor of any class or clique.

The Tuberose.

There is no great skill required in the growing of this beautiful flower. All that is needed is a little carefulness, and for this the flower will make ample amends.

The bulbs must be lifted before there is any danger from frost and spread in a warm sunny place

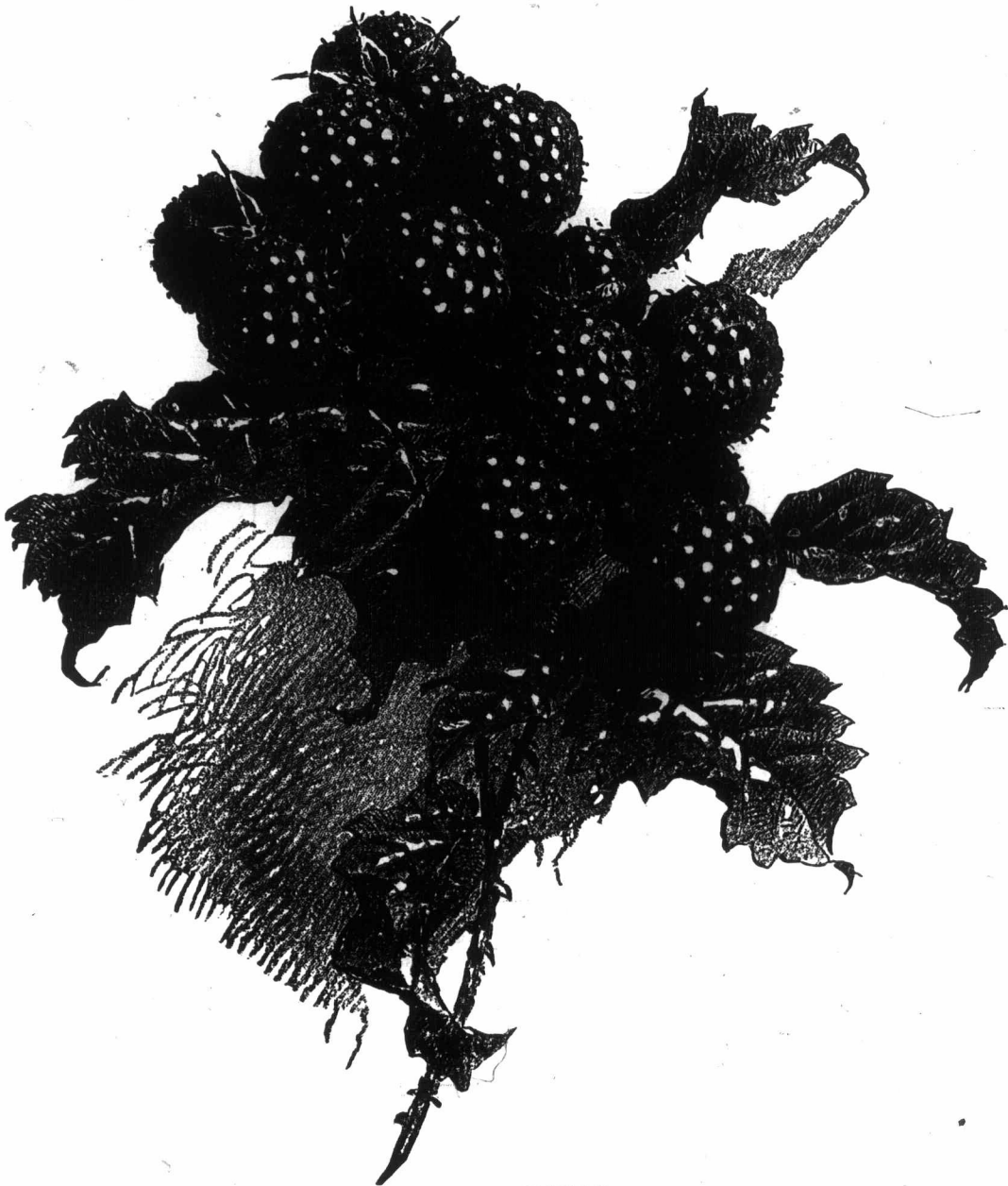
Tuberose are reproduced very rapidly. Therefore after a start has once been made with a collection of bulbs of one, two, and three years' growth, the owner can continue to set the same, and there will be no trouble in having all that are desired.

There is no difficulty about the planting and cultivation. They will do well on any soil that will produce a good crop of corn. The soil should be made mellow, so as to be easily worked, and the bulbs set at such distance apart as the extent of surface will allow, and covered with the soil. All the cultivation that is necessary is to keep the soil mellow and free from weeds.

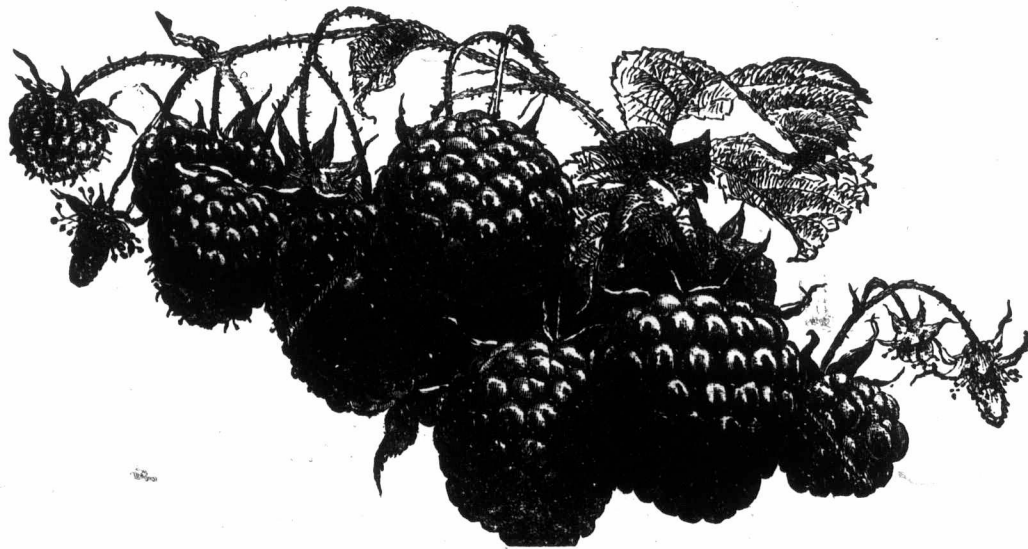
If desired for early blooming the bulbs may be set in boxes the latter part of the winter and kept watered and in a warm room. They will then come to flowering earlier than if not set in the ground until all danger from frost is past.

Celery and endive will still require the attention in blanching described in former hints. Cabbage and cauliflower are sown this month for spring use. The former requires some care, as, if it grow too vigorous before winter, it will all run to seed in the spring. The best plan is to make two sowings, one early in the month, the other at the end. The rule is, get them only just so strong that they may live over the winter in safety. Many preserve them in frames; but they should have wooden sashes or shutters instead of glass, so as not to encourage them to grow much. Cauliflower, on the other hand, cannot well be too forward. Most persons provide a pit of stone, brick or wood, sunk five or six feet below the surface of the ground, into which leaves, manure, or any waste vegetable matter is filled. When quite full it is suffered to heat a little, when it will sink somewhat and have more material added to it; about six inches of good, rich loam is then placed on it, and early in November the cauliflowers planted out. The object in refilling the leaves so often is to insure the plants remaining as near the glass as possible, which is very essential in the growth of cauliflowers. Lettuce is treated in the same way, and seed should be sown now to prepare for the planting. The cabbage lettuce is the kind usually employed. Tomatoes will still repay care bestowed in keeping them in shape. Potatoes are best taken

up at once, as they appear less liable to rot afterwards, than if left long in the ground. Egg plants like plenty of moisture, with sun and air. If the ground be dry, give them abundant manure water; they will bear until frost. — [The Gardener's Monthly and Horticulturist



THE GREGG RASPBERRY.



THE CUTHBERT RASPBERRY.

to thoroughly dry. If they become chilled in any way, either before being lifted or during the winter, their value is destroyed. But if kept in a warm closet they will repay for all the trouble by their spikes of beautifully pure and fragrant blossoms.

Stock.

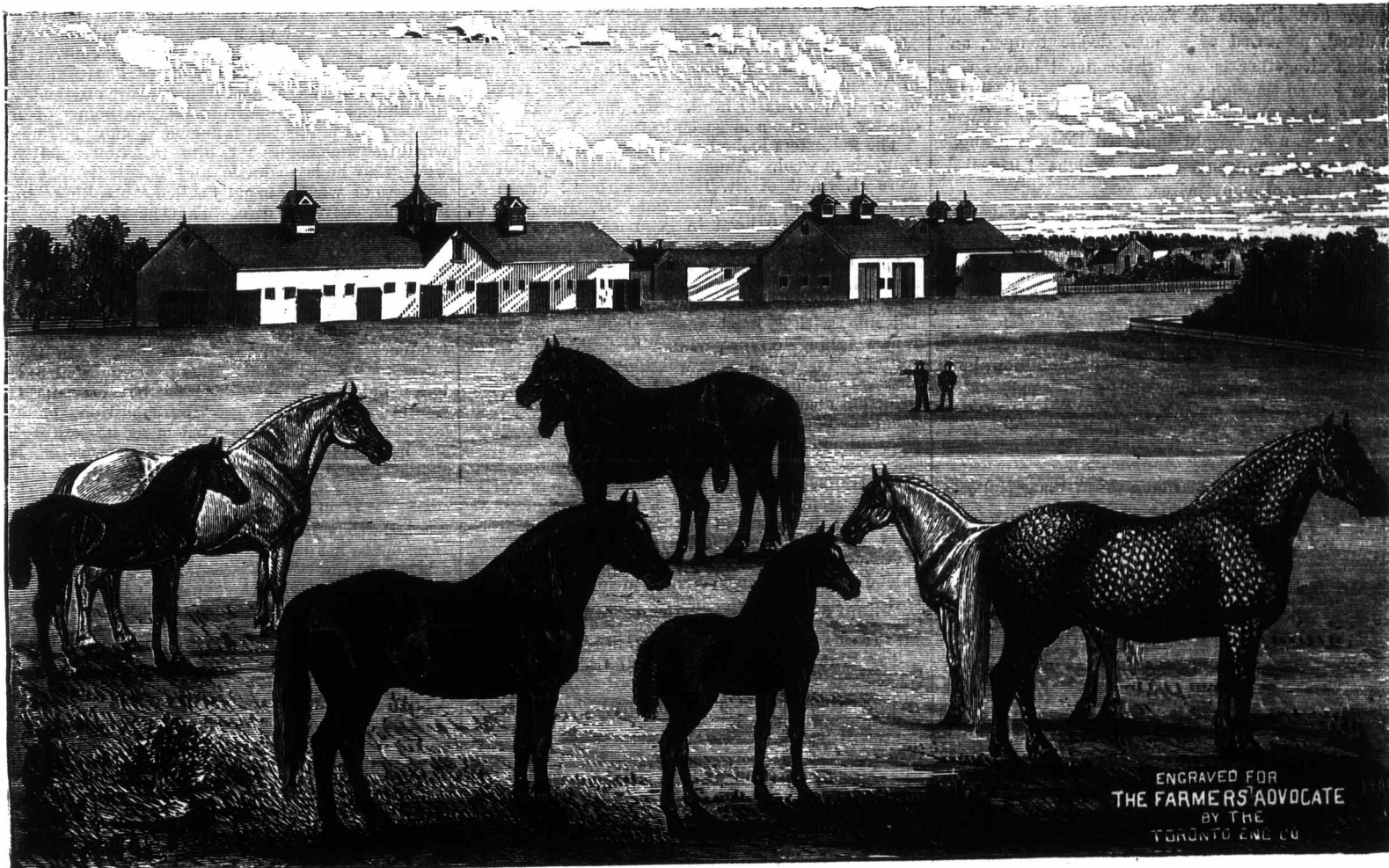
The Essex Stock Farm, Owned by Hiram Walker & Sons.

In June we took a flight to the south-western peninsula of Canada, namely, to Amherstburg and Windsor, in the County of Essex. There is a large quantity of good land in this county; there is also considerable wet land in it, but for a fine summer climate and for the production of grapes, peaches, etc., the locality ought to indicate this as the best. Still, despite the natural advantages, there is much of this county in a backward state. Some of the land is occupied by the negroes who had run from slavery, and their descendants, and a large quantity is held by French Canadians. Neither of the above classes have any exalted name as improving

ada this year, and is about to run a steamboat to and from the American shore. Despite all these allurements, Mr. W. delights in his farm and strives to set a pattern to others; nearly every day he takes a drive about it. His horses appear to be his principal attraction, and with pride he boasts, and that we believe truthfully, that he has the best Percheron stallion that has ever been brought to America. We must admit that this horse is the finest specimen of the Percheron breed we have ever seen. He has other Percherons, among which are three very fine imported mares; they each have a colt. Mr. W. has a large number of fine, large brood mares, besides the Percherons; we believe they are the finest lot of brood mares we have ever seen in one lot. The mares and colts are large and powerful, and would be admired by every farmer; but the citizens would stand and admire his pure-bred racers or trotters, more real pictures for beauty and activity. It was a fine sight to see between 40 and 50 brood

Preparing Stock for Winter.

"A stitch in time saves nine," is not more true in mending torn clothes than in getting farm stock through the winter. The calf, the colt, the cow, or the sheep that enters upon the winter in a thrifty condition and in good flesh, will give the owner but little trouble, and can easily be kept improving during the winter months. On the other hand, animals that the storms of winter find in a weak and emaciated condition, will require constant care and attention, at a very considerable expense, if they survive at all. Nine-tenths of all the losses of your stock that occur during the winter months, are animals that were in low flesh at the beginning of cold weather. The fat and hearty steer, cow, sheep, or colt will toss its head in the exuberance of health and strength, bidding defiance to the coldest weather, while the lean weakling stands with arched back and drooping head shivering in the fence corner. Nothing affords a



THE ESSEX STOCK FARM, OWNED BY HIRAM WALKER AND SONS, WALKERVILLE, ONTARIO.

and progressive farmers. Although many make a comfortable existence, they are apt to be slow in making improvements in roads, draining, etc., and thus this beautiful part of the country is apt to be rather lower estimated than it would otherwise be. Mr. Walker, the most progressive gentleman in the county, says: "The great difference in the prosperity of this locality consists in this, that the American motto is, 'Do not put off till to-morrow what you can do to-day,' but the French Canadian and negro motto appears to be, 'Do not do to-day what you can put off till to-morrow.'" Mr. Walker has been one of the successful men. Business prospered and increased with him, from aid to principal, from wholesale to manufacturer, now owning 5,000 acres of land in this fine county, only 1,600 of which are yet under proper crops of hay, grain and pasture. The remainder is being gradually brought into cultivation.

Mr. Walker keeps 2,000 head of cattle, has a car factory, a newspaper, is building 50 houses in Can-

ada and their colts in one field, every one appearing sleek and comfortable. Some of the colts were so attached to man that they would follow us about the field and apparently coax to be fondled. Messrs. Walker & Sons have also about 100 head of Shorthorn cattle, among which are many very choice animals. Their Durhams and improved Berkshires would both have their admirers. Do you not think this is a step to be commended, that is, that Mr. Walker has evinced such an interest in improving our stock? We wish Mr. Walker and all such men success in their laudable undertakings.

It should not be the sole aim of the editor of an agricultural paper to present only new facts to his readers. We all need to have the old and well-known facts brought up to our notice.—[Farmer's Review.

"I continue to appreciate the FARMER'S ADVOCATE; it is a valuable paper in the interest of the farmer." ADAM FERGUSON, Athol House, Campbellton, N. B.

more perfect protection from cold weather and hard storms than robust health and a good supply of fat; and when to these two conditions we add artificial shelter and abundance of good food and water, we have all that is required to insure the economical wintering of farm stock. If low condition as well as storms and cold must be combated, the watchfulness as well as the expense must be doubled.

Some fine Arab horses were sold at auction a few weeks ago in London, Eng. About 200 persons were present at the sale, among them Lord Bradford, Lord Rosslyn, Lord Hardings and Mr. Percy Wyndham. Eleven horses were offered, and the total proceeds were \$7,750. Pharaoh, a pure Arab stallion, brought \$2,625 from Count Potoki, who takes him to Poland. Brood mares averaged \$600 each, and a two-year-old filly went for \$750.

"I have no hesitation in saying that the ADVOCATE is the best agricultural paper in the Dominion or even in the United States." HUGH McMILLAN, Elmsdale, Nova Scotia.

Stock at the Western Fair.

HORSES.

The exhibition of horses was all that could have been desired for our Western Fair, both in point of numbers, variety and excellence; the extensive range of stabling being entirely filled with the ponderous Clydesdales, English shire-horse and Percheron, as well as with those of gentler blood, the farmers of the western peninsula showing their determination to improve the breed of horses by importing some of the best animals that can be procured. The superiority of the English shire-horse is at last recognized, there being some magnificent animals of that class on the grounds.

Mr. Hiram Walker, of Walkerville, was well to the front with many of his splendid animals, notable amongst which was the celebrated stallion Romulus, which commanded great attention. Mr. E. H. Coryall, of Petrolia, exhibited his magnificent carriage stallion Victor Golddust, winner of first prize and diploma at Toronto; he is a splendid animal, possessed of a most docile temper, and taken altogether is one of the finest horses that ever looked through a bridle.

Mr. R. J. Turner, of Brucefield, showed Farmer's Glory, a 3-year-old imported English draught horse—a magnificent animal—weighs 1,950 lbs., and winner of many prizes.

Mr. Coleman, of Brucefield, had a very fine 2-year-old English cart mare, imported.

Messrs. W. & J. Peters, of London, exhibited the beautiful blood stallion "Lord Byron," one of the best thoroughbreds in Western Ontario.

Mr. Thos. Logan, of Brock township, showed "Ranting Robin," a general purpose stallion; he is a grand horse, and winner of 21 first prizes.

Mr. Wm. Samsburn, of Blanchard, exhibited "Charley Ross," an imported Clydesdale; he took first prize in the heavy draught class.

Messrs. Horton & Innes, of Hibbert, Perth county, showed a splendid Clydesdale mare, only imported two weeks ago; she took first prize in her class.

Mr. Jas. Collier, of Beachville, exhibited a magnificent pair of roadsters which took the prize of \$50 for the best pair of roadsters in harness.

Mr. Thos. Robson, London Township, had a very fine draught horse "Prince Tom," imported last year; he is sorrel colored, and as this color is not fashionable it was not in his favour.

Messrs. Swarty & Meek, of Peachfield, had a fine 2-year-old imported Clydesdale, "Nero," a very fine animal. Also a 3-year-old shire horse, "Prince of the Forest," one of the finest animals upon the ground.

CATTLE.

Taken as a whole the exhibition of this class fell short of that of former years, in point of numbers; there were, however, some excellent cattle exhibited. In fat stock Messrs. Groff, of Waterloo, showed some splendid specimens, notably a couple of steers weighing respectively 2,600 and 2,500 lbs., illustrating what Canadian farmers can do.

The show of Shorthorns fell short of our expectation, there being few animals of high merit exhibited. Messrs. Groff, of Waterloo; E. W. Chambers, of Woodstock, and J. & W. Wyatt, of Wellington, being the principal exhibitors; the latter showing their celebrated bull "Barnpton Hero," which won the gold medal at the Provincial Fair at Kingston.

The Devons were prominently represented by two exhibitors, Mr. A. Wood, of Islington, and W. & J. Peters, of London. The former had nine head of all ages. They were all in fine trim and showed good feeding and careful handling. The Messrs. Peters, old time breeders, were forward with a large herd, and noticeable were some aged cows of rare merit. The competition was not as strong as in former years, but the animals were choice.

The Herefords were represented by Mr. C. Bridges, of Shanty Bay. The animals exhibited were few in number, but this was fully compen-

sated for by the excellence of those exhibited; this gentleman, by judicious selections of the prize winning animals in England, has placed his herd at the head of this class on the continent, for merit.

AYRSHIRES.

The competition in this class was limited principally to Mr. Caswell, of Ingersoll, and A. Kains, of Byron. This class of animal does not seem to gain in favour with our farmers, their lack of beef-making qualities being greatly against them.

There were no Jerseys upon the ground, our Canadian farmers finding it more profitable to breed general purpose animals, than wholly for the dairy.

We were rather surprised that there were no Polled Scotch cattle on exhibition, as they are now in such demand in the States. The prizes offered should have been sufficient inducement to owners of this class to have made an exhibit.

SHEEP.

Were the best represented live stock on the ground, and it is doubtful whether there has ever been a better exhibit in Canada.

The Cotswolds were well represented, the entries were very numerous, the animals were very large, and with heavy fleeces. In this class Mr. Jas. Main, of Trafalgar, had a large flock of good animals, principally imported. Mr. E. W. Chambers, of Woodstock, had 14 head. Mr. Henry Arkell, of Guelph, shows 17 head. Mr. Jas. Franks, Dorchester, had also a large collection.

The Leicesters looked well with their fleeces of long, clean wool. Among the principal exhibitors were H. Snell, of St. Helens, with 12 head; J. Scott, London, with 10 head; H. Rawlins, of Bosanquet, had 9 head in good order, and R. W. Stevens, of Delaware, showed six good animals.

The Lincolns were a very choice lot, showing some fine, silky wool, long and of good staple. The prominent competitors were Mr. Walker, of Ilderton, with 26 head, among them a magnificent ram weighing 400 lbs., winner of first prize at Toronto, and a pair of ewes weighing 613 lbs.; Geary Bros., London, had six head imported from the principal flocks in England; Mr. John Rowell, of London Township, also exhibited 12 head of first-class animals.

Southdowns were numerous; although but two competitors, Messrs. D. Perley, Township of Paris, and Mr. Rondison, of Galt; the former showed 31 head, and the latter 13; in this class there were some animals of very indifferent merit.

Oxford Downs were well represented, some splendid sheep being shown, principally by Mr. J. C. Ross, of Jarvis, who had 13 head in fine trim; Mr. P. Arkell, of Teeswater, showed 12 head, and Mr. Henry Arkell, of Guelph, 10 head.

The Shropshires were a splendid lot, mostly imported stock; these and the Oxford Downs bid fair to be the popular sheep in Ontario, both for their wool and mutton. Mr. Humphrey Snell, of Clinton, exhibited 5 head; Mr. Frank Shore, of Westminster, showed 10 head; Geary Bros., London, had 5 head; C. Bridges, of Shanty Bay, had also a large exhibit in this class.

Mr. Rock Bailey, of Union, county Elgin, had a splendid exhibit of Merino sheep. There was no prize offered for this class. This was to be regretted, as we ought to encourage the home production of fine wool instead of importing it.

SWINE.

The entries in this class were not very numerous, but comprised some very fair animals, the Berkshires being the largest exhibit. The Suffolks also made a strong show. The largest animal was an immense Yorkshire boar weighing about 800 lbs. The other classes of pigs were well represented, showing good breeding and feeding.

Care of Horses.

The care and breeding of horses, says Dr. Loring, Commissioner of Agriculture at Washington, is a difficult and doubtful business. The horse holds a position in the scale of being which makes him peculiarly sensitive from his embryo life upward, to all surrounding influences. The fact that but a few generations are necessary to change almost his entire structure in order to conform to a change of climate and soil, is sufficient evidence of the ease with which his race may be modified by the accidents about him, or by the designs of his master. Suffolk pigs, Shorthorn cattle, terrier pups can be bred to order. Not so the horse. He is a bundle of forces, moral and physical, either class of which may be disturbed by influences almost beyond our control. A calm, courageous, docile, intelligent mare, bearing a colt sired by a stallion equally well

balanced with herself, may be subjected to sudden fright; she may fall into bad hands and be lashed to madness while pregnant; she may have her attention fixed upon some ignoble companion, and the character of her offspring be so different from her own or that of its sire that she is ashamed of it (or ought to be), and her owner despises it. Every man knows that some families of horses are easily broken to harness, in fact have a natural gift in that direction, and take kindly to the strap and the shaft; and that other families are rebellious and violent and almost untamable. Now, these qualities may easily be transmitted, and they may easily be destroyed. A rough master may upset all the virtues of generations and unexpectedly find himself the owner of a colt inspired with all the wildness and savagery of its remote ancestors. It is a good deal to ask, I know, but if a man means to raise up a good tempered and civilized family of horses he must be good tempered and civilized himself.

It should not be forgotten that the care we bestow upon our horses will always meet with its reward. This care should never be suspended from infancy to old age. The colt which is born upon the farm can easily receive the kind treatment which is bestowed upon the other animals there, and may be so fed and handled as to control the real value of all his future life. The American horse is subjected almost from his birth to the kind of influence which surrounds the home of his master, and under this influence it may be found, when the time comes for him to enter upon his work, that he is so docile and obedient that the business of what is usually called "breaking" him is simple, easy and safe. That he should be fed well seems almost useless to say. The care he should receive during the first winter of his existence often effects the entire development of his whole system. It is possible that many colts are overfed, and that the easy and cheap supply of corn from the great Western cornfields has had a tendency to overload the horses bred upon those farms with fat at the expense of their muscular system; but a colt should never be starved. He should be kept in good growing condition, having access to the cold fresh air whenever he desires it, and be supplied in abundance with pure water. He should never be stinted in hay or whatever other forage plants may be provided for him, and this system of feeding should be pursued until he has reached that maturity which makes him truly valuable to his owner. The young horse requires a large amount of bulky food, and should never be deprived of this with the expectation that a large supply of grain will be a good substitute. It cannot be. Whether a young horse be put to the dray, on the road, or even upon the track, he should be fed with a liberal allowance of good hay, and not until he has reached his maturity should he be confined to those stimulating foods to which his stomach and nerves are then adapted. Of the health of the horse—especially the horse engaged in hard work, whether in the city or country—we cannot be too careful. The loss of a horse is a great loss to the ordinary farmer. The loss of a good horse is a great loss to his owner whatever his business may be, and it is a matter of economy, therefore, so to protect the horse against disease that his time will be constantly at our command and his usefulness prolonged. It is very seldom that a horse when he is sick can be worked with impunity. The best remedy for his disease is undoubtedly fasting and rest, and this remedy should be provided for him as soon as it is discovered that he is in any way indisposed. A word with regard to stable management of the horse seems to be appropriate here. I have already said a horse cannot endure all the toil that is imposed upon him with impunity unless he is properly and thoroughly cared for. One of the most valuable points in the horse is his forefoot. Almost all the lameness which troubles our horses on the road is to be found here. The forefoot is exposed to all the ill effects of hard roads, bad shoeing, and bad care in the stable; and it will be found that more horses are crippled in their forefeet than in any other part of their locomotive system. Splints and spavins are common; but splints and spavins somehow or other are very apt to take care of themselves. The fatal lameness which renders a horse utterly worthless is that found either in the navicular bone or the laminae of the forefoot. Now, it is, undoubtedly true that no shoeing will protect a horse's foot against the ill effects of hard roads, rough pavements, the heat of the street and the strain of travelling, unless that foot is properly cared for in the stable; and if the foot is thus properly cared for it is astonishing how much

bad shoeing and hard roading it will endure with impunity. As a rule it may be said the horse should never stand with its forefeet in the stable upon a wooden floor; nor should he stand upon earth so saturated with water as to keep his feet damp and soft. He should stand upon brick or stone, either of which under almost all circumstances, and especially if a little moistened, will be cooler to the foot and will protect it against being dried up to brittleness and contraction. The fore-foot of every horse worked in cities or on the road, and everywhere except upon the common labor of the farm, should be cleaned every morning properly; not with a flood of cold water, but with a wet cloth or sponge, and with this treatment there should be applied a mixture of tar and honey and lard. Thus treated, there is no doubt whatever that the horse's foot will endure the wear and tear of many years, and will also endure that bad shoeing for which almost every nation on earth seems to be distinguished.

Corn Fodder.

The opinion we have often expressed and desire to repeat is, that there was not that attention paid to the curing and saving of the corn fodder that its value demanded. Every good farmer must know that cattle eat it greedily through the winter, and if cut and steamed it is as good for them as the best hay, and really more milk-producing. Where then is the necessity of allowing it to remain in shocks until the middle or end of November, and even sometimes running into December? Corn should not be cut down until the stalks are dying and the grain is pretty hardy, and then it should remain no longer in the field than is absolutely necessary for the drying of the grain. It should be husked as early as possible, and the fodder tied up in bundles and either carefully stacked near the cattle-stables or put under shelter in sheds.

It is well-known, too, that horses prefer it to the best hay; also, that the blades are especially sought for to feed racing animals, strengthening their wind and bottom beyond any other food. It is besides wholesome provender and helps most beneficially in making the winter supply of hay hold out till late in the spring, with the addition of roots, which every farmer, who shrewdly looks to the main chance, ought to cultivate for feeding in the early part.—[German town Telegraph.]

Stock Raising on Small Farms.

The owners of small farms, or farmers engaged in a system of mixed husbandry, often over-estimate the advantages for stock raising possessed by those with large farms and who make this a specialty. The latter do possess important advantages, but there are some compensations to the stockman on a small scale.

The man with a thousand acres, a herd of hundreds, etc., can have men employed who will give their whole attention to one branch of the work, and learn to do this better than the average laborer. The large farmer has advantages in selling. He can make up one to a dozen car-loads of stock ready for the market; can sort them to make them sell to the best advantage; can have buyers come to his place, or can ship as he chooses. Full use at home is found for one or more stallions, bulls, etc., and the cost of keeping them counts as a little matter. But the small farmer—he with one hundred acres, for instance—has also his advantages. He can rear and feed a few colts, steers, pigs or lambs with almost no outlay for extra labor and very little perceptible cost in food. He needs horses for his farm work. Often brood mares serve his purpose equally well, and the one, two or three colts dropped each year cost comparatively little to rear. Cows for a home supply of milk and butter, of course, will be kept, and often there is abundance of grass in the pasture for a few "young things," and in the winter the stalk-fields, the straw stacks, the soft corn, etc., can be eaten by these, when it might otherwise be mainly wasted. In the winter the large stock grower must have men whose main business it is to feed and care for the stock. The small farmer can add the little additional work as a part of the necessary "chores" and scarcely notice the extra time or labor. Of two farmers of the class we are speaking of, the one "with a little extra stock" will usually do as much and as good work during the summer in the fields as his neighbor who "only keeps a cow or two, and enough hogs for his own meat." In the winter the fact that some extra labor is provided for each day is often a positive advantage.

The small farmer has another advantage.

seems to be a law of animal life that the fewer of any sort of animals that are kept within a given area, the more healthy they are. We once asked a large and very successful swine breeder this question: What is the greatest number of hogs that can be kept together with the highest percentage of profit on each? To this he promptly answered, "One. The profit on each hog decreases in proportion as you increase the number." His idea was that the health and thrift of the herd decreased in proportion as the numbers were augmented. The greater economy of feeding and management which the large farmer or feeder may practice may possibly more than compensate for this loss of health and thrift, but the illustration serves to show that the advantages are not all on one side.

It is not necessary to money making and deserved success in fine stock breeding that there should be a large herd or flock. On the islands of Jersey and Gurnsey nearly all the herds are quite small. In horse breeding, there is no reason why the man with three or four mares may not take a high rank as a breeder.

Even for the "renter," if he can secure a lease of the land for three or five years, a fair degree of attention to stock growing will be much better than the exclusive grain growing, which is so often the rule with this class. We have known instances in which two renters each seemed "to just about make a living;" but at the end of five years one would have a lot of live stock worth a few hundreds of dollars; the other have less than when he commenced.—[Breeder's Gazette.]

Chicago Horse Fair.

[FROM OUR OWN CORRESPONDENT.]

A purely horse show in the States is rather a novelty, but judging from the auspicious opening of the Chicago Horse Fair, held from September 16th to 23rd, such exhibitions may be expected to grow in popular favor. The affair is the outgrowth of the Chicago Fair, which was held last year, and which was to have been held regularly every year thereafter. However, the leading lights or projectors of the enterprise being more in sympathy with horses and horsemen than the general agriculturist, resolved to have an extensive horse exhibit. It may be added that both the Fair and Horse Show were the outcome of the Fat Stock Show, as the managers of the first named enterprises were unable to get their thumbs into the Fat Stock plum pie as much as they desired. Being dissatisfied with the policy pursued by the Illinois Board of Agriculture in regard to the annual fat stock exhibit of Chicago, of course they had the privilege of starting an issue of their own, which they are at perfect liberty to run as they see fit, and as has been stated, their choice is to "run" the horses.

Saturday, September 16th, the first Chicago Horse Fair was informally opened, and the entries of traveling, running, and draft stock were large. On the first day there were some preliminary races, but the fair proper began on the following Monday with a large attendance, and a tolerably good prospect for a successful week. For thoroughbreds and roadsters there were twelve rings, and the animals shown made a creditable display.

Racing occupied most of the time, and some good time was made considering the strong, unfavorable wind which prevailed. Purses were liberal, and some promising young things from the best Kentucky and Illinois stables were displayed.

Probably the most substantial feature of the show was the splendid array of draft animals. There were numerous entries of Clydesdale, Norman, and English draft or Shire-bred horses, including a large number of the latter, recently imported.

During the past few years there has been developing a very strong demand for heavy draft horses, and that particular branch of the horse trade has enjoyed about as great activity as the Polled breeds have in cattle circles. Farmers are realizing the value of breeding improved stallions on light and medium weight mares of the common breed. This country does not lack in number of horses, but in quality. The Fishers, of Goderich, Ont., and other Canadians, can testify to the growth of the demand for improved horseflesh in the West.

It is reported that when Mr. Bemis, of Chicago, was in London, he went to the house of James Nelson & Sons, the celebrated cattle salesman, and told them to purchase for him four of the finest draft horses in England. They told Mr. Bemis that they would have to charge him 20 per cent. commission, and he told them he would pay 50 per cent. if necessary on any figure they may pay, but he wanted the best in the land. Some time after Mr. Bemis received a letter from the firm, of which the following is an extract:—"I attended the show at Peterboro', Thursday last, and secured for you the first prize winners. The cost is 240 guineas. These horses took first honors in what I called the best show of cart horses I ever saw. They are bays, 6 years old, and have worked together since 3 years old up to two days prior to coming to Peterboro'. They weigh about a ton each, and are not fat. They of course match in color and height, and, last but not least, are as well worth 400 guineas as 240 guineas. If you enter a Chicago show for geldings you are sure to win." Subsequently the firm purchased another team fully as good as the first, and Mr. Bemis shipped the four to Chicago, they costing him \$4,000 here. They are to be shown on the track driven four-in-hand. Their names are Bemis, McAvoy, McGarigle, and Bullwinkle.

The entries were decidedly the largest ever made in this country, there being 401 horses in the exhibition rings, and 120 in the speed rings.

Stall-Feeding Cattle.

It is related of the ancient philosopher Cato that on being asked which was the most certain profit arising out of agriculture he replied: "To feed stock well." If we should ask any agricultural expert at the present day the same question, we should certainly receive the same answer, for it not only "stands to reason" that two profits are greater than one profit, but it is the universal experience with the best farmers that to feed the produce of the farm to stock and sell only the ultimate and most concentrated form of these products is not only the most indispensable means of maintaining the fertility of the farm, but that it is the method by which the most money is made out of the soil. In agriculture, as in other industries, it is found that the greatest profit is in making from the raw material the most finished products, and so putting this raw material through several processes to secure not only the relative profit made upon each, but also to gain the advantages which must necessarily result from the saving of expense by reason of combining several operations in one, and avoiding freights and other charges incidental to every change. As agriculture is the first of all our industries, that it should be carried on in the most economical manner is the most desirable for all concerned; because it gives the farmer the most profit while it gives the consumer his meal at the lowest price.

It is everywhere admitted by stockmen that the profit gained in rearing cattle for the market is rarely ever less than 40 per cent. yearly, and figures are often given to show that 75 per cent is frequently realized. And this is the result of feeding cattle from birth to maturity. But it is a well known fact that there is still greater profit in feeding a thin steer costing 5 cents a pound alive until it is worth 7 cents a pound, because there is not only the gain by the increase in weight, let us say 200 to 300 pounds in three months' feeding, at 7 cents a pound, but the 2 cents a pound upon the whole weight of 1,000 pounds or more. This, on the whole, is equivalent to a much greater profit than could be gained from the sale of the crops that are fed.

A regular system of feeding a number of cattle or sheep upon farms, as a part of the farm work, of course necessitates the growing of suitable crops for their support. To feed hay and corn would not certainly be found very profitable, because these are the most costly crops that can be grown upon long cultivated soil, and they are very saleable and bring high prices. But they cannot be produced under the ordinary system of farming with sufficient profit unless under exceptional circumstances, and this is the burden of the complaints made by farmers everywhere. Indeed, Eastern farmers find it so costly to grow wheat and corn that they are not even producing enough in the great States of New York and Pennsylvania, not to mention all the lesser States adjacent to them, to supply the home consumption of flour. Nor will these costly and valuable crops be produced under any other system than one of stall-feeding cattle and growing

roots with which the straw can be consumed, together with the use of purchased feeding stuff of high nutritive value, as linseed and cotton seed cake meals, which cost not more than, or not so much as oats and corn, and are twice as nutritious. Pasturage not being required, every acre of the farm is under cultivation, and as one acre of roots with straw and purchased feed can feed five head of steers for 150 days, the economy of land is very great, a very large proportion of the farm being left to produce grain and hay for sale. So that root-growing is a *sine qua non* of this business and the key to the whole system.

Indeed, the stall or yard feeding of cattle for meat is very similar in every way to the soiling or yard-feeding of cows for the dairy, and one of those special methods of farming in which concentration and system offer a far more remunerative result than common grain farming, and this for the very sufficient reason that it takes the bulky and least saleable crops and changes them into concentrated and very valuable and saleable products, and at the same time, from these least exacting proceeds of the soil, is returned a large quantity of very rich manure for the growth of grain crops. It is well known that dairying has been hitherto the most profitable kind of farming, that it has brought more money into the farmer's possession, and has brought his land meanwhile into a more continuously improving condition than any other use to which the farm could have been devoted. But just now dairy products are in excess of the demand and consumption, while meat is scarce and high in price, and is evidently bound to sustain its high value, no doubt, permanently. And these facts show that there is an advantage just now in changing from the dairy to feeding cattle.

But we set out to write about "stall-feeding," and this refers more particularly to manure cattle. Farmers of our acquaintance whose farms give evidence of that pleasing condition known as forehandedness have reached this result by a regular system of stall-feeding in the fall and winter as many thrifty lean cattle as they have room for in their sheds and barns, and by feeding to these all the straw and the corn stalks as rough fodder which would otherwise have been thrown out into the yard to be trodden under foot as litter, to be worked into manure, all of which represents for each ton so many pounds of flesh or fat, or, at least, so much heat and life sustaining elements as will release the richer foods from this duty of merely sustaining life, that they may be devoted to the more productive effect of making flesh and fat. And it is this branch of thorough farming which we here suggest to farmers as a highly profitable business, and one that tends in every way to the betterment of their farms.—[H. Stewart in New York Times.

Domestic Wools.

When urging the cultivation in Canada of finer and shorter stapled wools than the Cotswold and Leicester grades, so common amongst us, we are occasionally met with the remark: "These long wools pay the best, and you will not get the farmers to go to the expense of changing their sheep when they can raise more wool off Leicesters and Cotswolds." There would be some reason in this position if it were true that the sheep named pay the best. But when our home-grown fleece accumulates till there are a million pounds of it in a certain district of Ontario, and a quarter million in this very city, unsold, of what avail is it to the owners? What does it matter how cheaply Cotswold fleece can be grown if it will not sell?

However, as to the relative yield of Southdown and other Down wool, valuable testimony is afforded by a report which we find of the result of feeding and shearing sheep at the Ontario Experimental Farm, and it disposes of the contention we have mentioned. This farm showed, at the Toronto Exhibition, twelve fat shearing wethers, 18 months old. These were first crosses of Leicester, Oxford Down, Shropshire Down, Southdown, and Merino rams with common Canadian sheep. They were fed on peas, oats, bran, hay, green fodder and oil cake, and the clip of wool obtained from them was as follows, washed:—

	Weight, lbs.	Price cents.
Cotswold grade.....	9	22
Leicester grade.....	8	22
Oxford Down grade.....	9	28
Shropshire Down grade.....	8	35
Southdown grade.....	7	35
Merino grade.....	6	35

The following table shows the profit made from each kind of sheep. No account is taken of the manure, which would be equal in value for each animal, according to size:

PROFIT FROM EACH KIND.

	Carcass	Wool	Cost	Balance
Leicester grade.....	\$11 00	\$1 76	\$8 10	\$4 66
Shropshire Down grade	12 60	2 80	7 00	8 40
Oxford Down grade.....	12 60	2 52	7 40	7 72
Southdown grade.....	11 70	2 45	6 00	8 15
Merino grade.....	7 50	2 10	5 50	4 10

Thus, then, the position of the various grades as to profit is as follows:—1st, Shropshire grade; 2nd, Southdown grade; 3rd, Oxford grade; 4th, Leicester grade; 5th, Merino grade; showing the Leicester to be next to the lowest on the list.

No account is taken, in this calculation, of the value of the pelts, which should be worth from 20 to 30 cents each. And, as a prominent dealer in wool remarks upon this subject, "even the pelts of the Down sheep are worth more than the others; then the Southdown mutton commands a better price than the Cotswold, and the wool yield runs according to my tests, from 50 to 60 cents more to the skin." On all counts, therefore, the prospect is in favor of the short-wooled sheep.

Some farmers object to the suggested change, that it would not be worth while for them to buy Downs or Down grades, because fashion, having taken one change in favor of the fine wools, will presently take another change back to the long lustre wools. Also, that the smaller size of the proposed animals means a loss to their producers in bulk of carcass and in weight of wool. To the first objection we reply that when manufacturers in Britain and the United States have sufficient faith in the permanence of the present taste for fine wools to take out the old machinery which used the lustre wools and replace it with new machinery to the value of hundreds of thousands of pounds, purposely to work fine short wool, it is not likely that farmers will make a great mistake in following their lead, especially when the improvement in people's circumstances leads them to seek for finer woollen goods. And in reply to the second, we will only remark that it is not the Merino sheep which we have recommended generally, but Southdowns or cross breeds, which the table we have quoted shows to yield as much flesh and as much wool as Leicesters.

What Canadian farmers require to do is to raise such wool as our manufacturers can use. This is not done by one in ten. The consequences are that English, Scotch and cross-bred Australian wools are being imported by the million pounds for our mills, and yet there is a million and a half pounds of Canada fleece held in storage, some of it two years old, eating itself up in storage and interest, and unsaleable at 20 cents per pound, while imported wool of short fibre sells rapidly at 35 cents. One importer, we are told, has half a million pounds of wool on the way across the Atlantic for our factories.—[Monetary Times.

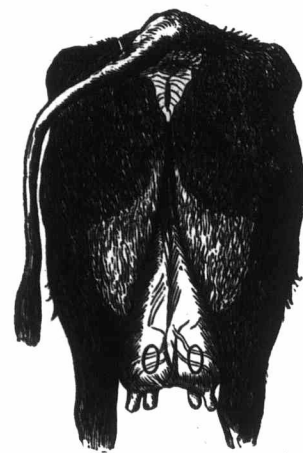
Escutcheon, or Milk Mirror of Cows.

The method of judging the milking qualities of cows by external marks was discovered by Francis Gueon, in France, about 30 years ago. It was ridiculed by some and ignored by many, but the few who took care to examine its merits found that it had a hard basis of facts.

As some of our readers may not understand the meaning of escutcheon, or milk mirror, it may be well to state that the up-running hair on the rear of an animal on or between the thighs, represents the mirror. The greater part of the hair covering a cow runs down; and in some of the bovines all of that on the rear runs downward too; but running upwards around the udder is what constitutes the mirror, and the line where the hair is running up, meeting that running down, is the demarcation of the mirror, and can be easily seen and felt.

This mirror assumes various sizes and forms, the form given in our illustration being superior to a great many others, and the broader the mirror the better.

Not the least important part is that the markings are present upon the male as well as upon the females, and in breeding reference should be had to the escutcheon of the bull as well as the cow, if the best results would be had. The markings are



also distinct in the calf in both sexes, and allow the breeder to decide with considerable certainty while the animal is yet young, whether it is worth raising.

Aside from the mirror, the feel of the skin and its color, the barrel of the animal, the milk veins and the size of their entrance into the body, all have their weight in determining a good milker, and he who looks at the whole animal instead of solely at her udder, gets the best opinion of an animal's worth.

Monthly Cattle Fairs.

- Acton—Thursday following Guelph.
- Brampton—First Thursday in each month.
- Charleston—Third Thursday in January, April, July and October.
- Cheltenham—First Wednesday in each and every month.
- Elora—The day before Guelph.
- Erin—At the village of Erin, the Tuesday before Orangeville fair.
- Fergus—Thursday following Mt. Forest.
- Georgetown—First Friday after first Wednesday in each month.
- Guelph—First Wednesday in each month.
- Hespeler—First Thursday in each month.
- Harrison—Friday before the Guelph fair.
- Hillsburg—The Tuesday before the second Thursday in the month.
- Ospring—Monday before Guelph Fair.
- Orangeville—The second Thursday in each month.
- Rockwood—Tuesday before Guelph.
- Shelburne—Wednesday before Orangeville fair.
- Dundalk—Tuesday before Orangeville.
- Rosemont—Fifteenth of February, April, June, August, October and December.
- Primrose—Wednesday preceding Orangeville fair.
- Hockley—The last Thursday in January, April, July and October.
- Mono Mills—Third Wednesday in January, April, July and October.

MATURING THE HOGS.—A correspondent in the *Iowa Homestead* very well puts the argument in favor of maturing hogs. He does not see why one course should be wise in the care of cattle and another in the care of hogs. He says he can not afford to sell pigs at 150, or even 250 pounds, finding it more profitable to turn them off when from twelve to sixteen months old, and weighing 400 to 500 pounds. He gives plenty of food—milk while the pigs are young; fattening on corn, dry or soaked. In one case he found a pig which had had his treatment, with the others, weigh 30 pounds more than one which had been kept in a pen and "stuffed."

The Farm.

Roots for Winter.

Plenty of mangels means healthy animals and a full supply of milk, and he who one year raises plenty is not at all likely thereafter to neglect so desirable a crop. The mangel is comparatively a tender vegetable, and any hard freeze, one that will at all freeze the body of the roots, will greatly injure its keeping qualities, and so the crop should by all means be harvested before any danger of such a freeze. We begin to gather our mangels as soon as the middle of October, and as it requires steady work to secure our crop in a week or ten days, we expect to be all through by the 25th. With only a few hundred bushels, they may be left a little longer, as they can be hurried in on the appearance of cold weather. In *harvesting*, we have each man take two rows, and throw six rows together for a row of piles. In *storing* mangels two things are to be looked after—they must be kept warm enough so they do not freeze, and cool enough so they do not grow. Mangels are as easily spoiled by freezing as potatoes, and any amount of frost that enters the body of the root causes them to become worthless and decay rapidly; on the other hand, too much warmth causes them to sprout and this makes them shrivel and become corky. A moderate amount of shrinking without growing does not in the least injure their feeding value. If mangels are well dried when stored they are not at all likely to heat and spoil. In this respect they are not like turnips or Swedes. The same method and conditions that would keep potatoes well would be adapted to keeping mangels. If the cellar is so constructed that it can be well aired or ventilated on cool nights or days, so that the temperature can be kept down below 40°, I can think of no better place in which to store enough to last till early spring.

A good way of keeping mangels, although accompanied with considerable more labor, is in pits. Select a piece of dry ground where water will not settle in, or mush around the pits, and, if dry enough, dig one or two feet deep and about four feet wide and as long as desirable; fill with mangels from the wagon, piling to a height sufficient to make a steep slant to each side,—if a little dirt gets among the roots so much the better, as they are less likely to heat or shrivel; about every four feet apart set a common two-inch drain tile, or a tube made with three or four boards, into the top of roots, so it will protect clear through the roof of roots when covered up. Cover the roots now with a coat of straw or any other material to exclude the dirt, and on this put soil enough to exclude all frost, and as danger of colder weather comes on apply more soil, coarse manure or anything else handy, so as to keep all frost from the roots; when too cold the ventilating tiles or tubes can be taken out and the place filled with straw, and the whole covered with soil. A part or the whole of one of these pits can be taken out and placed in the cellar at a time when there is no danger of frost in handling them. One word as to *feeding* them. Some people, too lazy to properly cut them, claim that they may as well be fed whole, but I have always found it to pay, and pay well, to cut or slice all roots before feeding to any stock. Mangels can be sliced rapidly and very well by putting them into a long, rather narrow box, and by using a sharp spade, cut them, commencing at one end of the box; or they may be sliced in limited quantities with a knife and by hand; but in both these ways there is a liability of leaving some pieces nearly square or round, and of the cattle getting these pieces into the throat and choking. The best of all ways to cut any root is to use some sort of a cutting machine, and I much prefer those that use a sort of gouge for doing the cutting. This sort of cutter both cuts and breaks the mangel, and the pieces are much more irregular and do not pack so close in the box or manger when being fed. This sort of cutter does not cost over thirteen or fourteen dollars, and will cut from one to three bushels per minute according to the muscle used.—[Abridged from N. Y. Tribune.

Is There any Advantage in Very Deep Soils?

We have always contended that there was not, and time and again gave our reasons for it. It is important to remember that it is not alone deep soil that is to make good farm land. Though black, rich soil is a hundred feet deep, it is only the first foot or so, we repeat, that is of any material value to a good crop. Some roots go deep, but the chief feeding roots are near the surface, and in time they will exhaust the soil, and, unless the lower strata are brought to the surface at great expense, the crops will be poor and require artificial enriching. This was the case in Ohio. Here was deep rich soil, as deep as any one could wish, but in a quarter of a century or so it gave out and many a wheat field has been laid down again to grass, and cattle now graze over land which was once the grain-raisers' pride. The sub-soil might be brought up to the top, but the expense would be too great to make it profitable. No way is like the old way in many things, and no way of keeping up the fertility of the soil is like the old way of feeding it annually with manure. Soil may be as deep as one chooses and laughter and "pity" may be bestowed on our western journals and eastern farmers who talk about manuring, but the richest western soils are no exception, and the time will be when these deep soils will have to be annually manured like all the rest.

Even the deep plowing, the turning up of this rich sub-soil, is not always the best plan, even when the expense of turning it up is not so great an object, for notwithstanding the advice of the great farmer of Chappaqua to "plow deep," prairie-men never appreciated it. The universal testimony is, that in breaking prairie for cultivation the shallow plowed land yields the best crops. There is reason for it, but we need not give it here, where only the undoubted fact is of consequence. The English have no virgin soil, no black deep bottoms to their land, but by judicious and cheap management it yields to-day crops of which the black lands of Iowa might be proud.—[Ex.

Autumn Cleaning of Land.

No system of tillage can be complete where the Autumn cleaning of land is dropped out of it. Autumn cleaning and ploughing is the foundation of all good tillage. Too much cannot be said or written to urge continually its importance on the attention of farmers. Now is the time to grub, harrow and plough; more can be done now by way of destroying both roots and seeds of weeds than can possibly be accomplished in the hurry of other seasons. After the grubbing or light ploughing has been performed, and the stubble and surface weeds cleared away, the land should be allowed to stand some short time before deep ploughing for Winter should be gone on with. Now is the time that all the annual and other weed seeds will have made a start, and when the growth is visible well over the surface, the deep tillage ought to be set going, and the young growth of weeds destroyed, which is sure to be the case when turned into a deep furrow. This practice will save the farmer many an anxious hour of thought, as well as save time and expense at a very busy season of the year. It is altogether a mistaken policy that allows the land in tillage to lie idle a day; even as the corn is being stooked or stacked in the fields, the skim-plough or grubber should be at work; the exposing of a fresh surface is always beneficial to the land, and the fast shortening days of Fall ought to stimulate our actions to give the soil a fresh surface for the few remaining days of sunshine, which, at this season of the year, is of so much importance to the land. And while we are trying to draw the attention of farmers to this much-neglected work of Fall cleaning, we would also urge on their notice another matter in connection with Fall ploughing—we mean sub-soil ploughing. It is rather a strange thing that, while all our farmers are acquainted with the benefit the land derives from spade culture, yet so few of them can be found to use a sub-soil plough. In almost all cases where the spade is used, sub-soil, more or less, is always brought to the surface, and yet some

farmers are horrified at the idea of even opening up the sub-soil without bringing it to the surface at all. This is not at all as it should be. If you consider that your sub-soil is of such a nature that, as you would say, "your land would be poisoned" by bringing it up, then, by all means, do not bring it up; but at the same time you can stir and deepen it, and this you must certainly ought to do when performing your Autumn ploughing. By this means the soil is so opened for the quick percolation of surface water, and the consequent admission of air into it, that the soil in the course of years becomes gradually deepened, and of much greater value. By deepening the sub-soil, or even breaking its crust, you add to the temperature of the soil, evaporation is also retarded, and the land is enabled to hold moisture in reserve for a dry time. Such advantages as these should not be overlooked by the farmer in his Autumn and Winter ploughing. Persevere with it now; do not put it off till the Spring on any consideration whatever; the Spring will bring plenty to do for its own season—often more than can be got through in proper time. Therefore, if the work of cleaning has not been commenced long ago, let it be gone about now, and with energy, so that there may be full time to leave all the tillage land in as rough a state as possible, so that the Winter rains may be passed off from the lands quickly, and frost have full power to play its part in destroying myriads of insect eggs, as well as fining down and ameliorating the soil. Although the advantages of Autumn cleaning should be apparent to the general body of farmers, we do not find its universal adoption. We are pretty correct in saying that a tithe of the farming community do not practice it.—[Exchange.

Agricultural Inventions.

Among recent agricultural inventions we quote that Mr. Charles W. Dutcher, of New Brunswick, has patented an improved potato digger, in which the potatoes and soil are raised by a scoop from the hills and carried by means of paddles, operated by a chain belt from the axle of the digger, over a slotted frame, back to a shaker frame, which is vibrated by means of a zigzag projection on the inside of the drive wheel of the digger, and the potatoes are separated from the soil.

Mr. Thomas Bower, of New York, U. S. A., has patented improvements in tree protectors. The protector consists of a series of upright slats, that are spaced to admit light and air, and held together by elastic bands. These slats encircle the tree for a limited distance from the ground, and terminate at their ends in outwardly bent barbed extensions, and may be made wholly of iron or steel, or partly of wood, and the bent portions of metal.

Shears specially adapted for cutting or picking grapes and flowers have been patented by John Sager. The jaws of the shears are made concave on their cutting edges, and upon the pivot which joins the parts together is placed a finger which extends along and a little below the cutting edge of the lower jaw. This finger has a spring-extension along the arm of the jaw and is riveted to it. The edge of the finger is made flat, as is also the edge of the opposing blade. The blade with the finger forms a clamping device, by which the grapes or flowers, after being severed, will be firmly held.

Philip Smith has patented an improved earth scraper, the body of which is made of a sheet of steel, struck up to form its sides, and an end plate is formed with flanges at its ends and on its bottom edge, and is secured to the sides and bottom of the body by rivets. Runners are secured on the bottom of the scraper by means of screws, that are beveled at their ends, and are concave on their under side, to prevent the scraper from sliding around when in use. Handles are secured to the outside of the scraper by means of staple plates, and are secured by nuts on the outside of the plates. The draw bail is attached in any suitable manner.

"I am now past my three score and ten, and cannot put in practice the good instruction and information contained in the columns of the *Advocate*, but I feel inclined to support you in your interest for the farming part of the Dominion. I think all young farmers should have the *Advocate* and follow its directions."—ROBERT MCNAUGHTON, Hopewell, Pictou Co., N. S.

Poultry.

The Poultry Exhibit at the Western Fair.

BY R. A. BROWN.

This exhibit has been a complete success, and, as well as other exhibits, been well filled. This department at London is second to none in the Dominion; in fact I believe the very best poultry in the Dominion are west of Toronto, consequently and which accounts for this department being always represented with the pure quill. The old Machinery Hall is well adapted for this department. It gives plenty of room for birds and spectators, besides being cool and comfortable, and has plenty of ventilation, &c. I very much missed the coops for collections, which I think as well merited and useful as herds are amongst cattle and sheep, and hope the future directors will replace them at the next fair. I am of the opinion, and it is the prevailing one of visitors, that the attendants have been either badly paid or have not done their duty, for many coops were very filthy, having the appearance of a week's deposit without cleaning. I also think the Bantams were placed too high to either show well or enable the visitors to inspect them. Another cause of complaint was that the varieties were so scattered it was most difficult to find them and still worse to compare them among their own classes. For the good name of the Association in the future we hope this last named grievance will be seen to and amended, so as to appear somewhat on an equal with other shows. I am quite aware that it is a hard matter to judge so large an exhibit and give justice to all, but some very glaring defects are too obvious to pass over without noticing them, and do not wish to point out the exact coops, but the visitors were somewhat surprised at the decisions, but not more so than the breeders, as some have made very dismal complaints as to the effects of the judgments. However, I earnestly hope that the judges will in the future take a little more pains in making their awards, as I am well satisfied that this one has not been perfect. As to the breeders, I am informed that there has been some probing and plucking done, but not to a very alarming extent. The exhibit of Plymouth Rocks was not very large, but some choice birds were on hand. In Leghorns the Whites were very nice, but I presume were hastily judged in the aged birds, as were the Browns in the chicks class. In the adult Brown Leghorns I think there has been a deviation from the standard, both in breeding and judging, as regards the size of the comb. Hamburgs were well represented, but there was some squealing amongst exhibitors. In Cochins the birds were well merited, but badly placed to inspect such huge frames. Brahmans were rather below the average, in respect to either quantity or quality, of past years. Polish were in full-blast and commanded the highest attention. Amongst the feathered tribe Houdans were not numerous, and there was a vast difference in color. As they were mated, we should say some were too dark. The Spanish seem to be almost given up, as there was only a small lot and poor. Dorkings were not numerous; the Silver Greys were *par excellence*. Games were in full force, and real good specimens were here in each class, but every exhibitor has not been delighted with the awards, as was quite evident from their language. Two monster pairs of Bronze Turkeys were well worthy attention. The Geese were better represented than in some previous years, and really up to standard requisites. The Ducks were worthy of a more prominent place than they had. Bantams were very well in dress, but some sick ones made their appearance. There were some Pigeons, and at that corner of the hall might be seen a busy throng, at any hour of the day, of visitors inspecting those pretty and useful pets; and so ends the Poultry Department of the Western Fair for 1882.

The Poultry at the Industrial Exhibition.

As far as excellence of birds and numbers, the show was a success. It is doubtful if ever there has been a better display of poultry in Canada. For some reason the birds were not on view till about five o'clock on Tuesday evening. The rules distinctly state that all entries were to be made not later than the 26th August, and the birds to be delivered not later than the 11th September. Surely any person intending to exhibit ought to be able to make up their minds by those dates. Yet we found that entries were being made after the time that birds ought to have been on view. One favored individual, we were creditably informed, made 40 entries after the appointed time. Was that just to the other exhibitors? Taking entries after the date fixed leaves an opening for fraud; it enables those behind the scenes to see the birds on hand, and know how the different classes are filled, and enables them to put in birds and thus obtain prizes, especially when a class is but poorly represented, instead of coming forth in honorable competition. The rules should have been strictly adhered to. Of course there was the usual amount of grumbling, and in some cases, we think, with good cause, notably in Aylesbury Ducks. The first prize was awarded to the bird that won last year; the ticket was allowed to remain upon the pen for some time when the bird was disqualified, and the prize given to a bird belonging to an influential member of the Association. It was nearly worthless for breeding purposes, being all broken down behind. It was not even on view with the other birds, but was kept in a pen outside the poultry house. Also in the best breeding pen of Brahmans the red ticket was suddenly removed from the pen that the prize had been first awarded to and the birds disqualified because one of the birds was wrongly marked, and the prize given to a pen in which the whole of the birds were marked similarly to the bird that caused disqualification of the other pen, the unfortunate owner of which sarcastically remarked that the real difference was that he was not a member of the Poultry Association. There seemed to be no stint of money for prizes, as awards were made for a common red fox, the animal being stowed away behind the building. Prizes were also given to a pair of white mice and a red squirrel. We were at a loss to understand what these creatures had to do with a poultry exhibition. As the Ontario, or it might be more properly designated the Toronto, Poultry Association seem to run the poultry exhibit, perhaps it would be as well if the Arts and Industrial Association were to hand over to them the whole of the prize list for division among the members of the Poultry Association in consideration of their filling the pens with different varieties of birds. This plan would do away with the trouble and expense of judging and save annoyance to exhibitors who have to bring birds from a distance.

POULTRY MANURE.—Poultry manure is well worth saving. It contains when dry, in 1,000 pounds, about 40 pounds of nitrogen, 20 pounds of potash, 2½ pounds of soda, 60 pounds of lime, 17 pounds of magnesia, 36 of phosphoric acid, and 10 pounds of sulphuric acid. These are worth at the market prices of fertilizers about \$15, equal to \$30 a ton. This, however, is much less than is popularly supposed to be the value of this manure, which some persons think to be equal to guano, or \$90 a ton at the above valuation. But to preserve all its fertilizing value the droppings should be carefully saved each day and mixed with a quantity of plaster and put into a dry place where they may not become subjected to any injurious fermentation. The best way to keep it is in close barrels, in which it may slowly decompose without loss of ammonia. The mixture of plaster adds nothing to its value, but preserves all its elements, and especially the nitrogen, from waste by absorbing the ammonia produced by its decomposition.

At this season of the year our subscribers are particularly requested to send short, chatty and practical accounts of their visits to the township and other shows. Let the boys and girls also try and send in their notes of points of interest, improvements and novelties observed by them.

The Apiary.

Preparing Bees for Winter.

I have wintered my bees successfully for several seasons by preparing them as follows:

Contract the brood chamber to 6 or 7 frames, in which have 20 to 25 pounds honey, cut a hole of about ¾ inch through each comb about 2 inches below top bar, lay a stick about 8 inches long, ¾ inch square across top of frames, cover with sheeting, woolen cloths or quilts, then an old sack of loose texture containing about a bushel of oat chaff pressed in close, then the cover or cap with a hole 1½ inch bored at each gable end, and covered inside with wire cloth for ventilation. Around the hive a box, about 6 inches space all around for packing, which is filled with oat chaff and covered to prevent getting wet. For entrance, have a 5-inch bottomless trough 7 inches long, about 5 inches wide and 4 inches high inside.

My hives are mostly simplicity style, 2 story, movable cap, frames, 10½x14 inches. I pack chaff about 6 inches higher than the brood chamber. During the winter I keep the snow from entrance, and on fair days I remove the cover from outside box and cap from hive, to dry the packing as the moisture passes through the chaff and settles on top like frost.

If the weather is mild enough, we take the bags with chaff off, and expose to sun and air until dry. This had best be done only on days when the bees can fly, as to work around the hives will likely disturb them and break the cluster, which should be guarded against. I usually leave them packed until the weather is settled and the bees find some honey and pollen.

During warm days in March, I place rye and oats chopped together, where the bees can work at it in sheltered places, and they work at it quite readily. By this plan I have wintered successfully and had early swarms, while most bees around me were either dead or very weak the past season.—[W. H. S., in Bee Journal.]

The Chevaux-de-Frise Hurdle System of Grazing.

The following are the particulars of the second results obtained under this system at Colinton, Midlothian, as ascertained by the weights of two lots of sheep, as taken when the sheep were put on the grass and taken off:—

WEIGHT OF 5 SHEEP OF LOT OF 20, AS TAKEN.			WEIGHT OF 5 SHEEP OF LOT OF 34, AS TAKEN.		
	July 3rd.	Aug. 21st.		June 30th.	Aug. 21st.
No. 1	102½ lbs.	118½ lbs.	No. 1	108 lbs.	128½ lbs.
2	96½ "	113½ "	2	99 "	116½ "
3	101 "	121½ "	3	105 "	125 "
4	82½ "	96 "	4	98½ "	122 "
5	97½ "	121 "	5	105½ "	124 "
	480	570½		516	616

The lot of 34 were small and inferior half-bred hogs of the Cheviot and Leicester cross, and the lot of 20 were "three-parts bred," but altogether inferior sheep of their class. The time between putting the sheep on and taking them off the grass was about 7 weeks, showing a live weight gain for the 54 sheep of 1,015 lbs. Adding this to the weight previously obtained by the first lot of 30 sheep in nine weeks (1,145 lbs.), it brings up the total weight of the first and second results, obtained between the first week of April and the 21st of August, to 2,160 lbs., which is the produce of less than two acres of grass-land and feeding stuffs, the latter of which costs 6d. per week for saccharated feeding meal. Taking the live weight given of 2,160 lbs. at 5½d. per lb. as its value at the market quotation of mutton, 10d. and 10½d. per lb., a margin is shown at the credit of the system of £49 10s., obtained upon two lots of sheep from April to 21st August, on the small area of two acres of grass. The third result will be given at the end of October with another fifty sheep.—[Live Stock Journal.]

"I never let an opportunity slip of saying a word for the *ADVOCATE*. I am only a woman, and a woman is not supposed to understand farming, still, I raise better stock than my neighbors, who do not take the *ADVOCATE*." M. HALL.

Any friend desiring a copy of our Exhibition issue, or of our October number, will send name and post-office on postal card.

"The best paper I have ever read."—W. SCHLICHTER, New Dundee, Ont.

The Catalpa as a Timber Tree.

Mr. C. M. Hovey says that much has been recently said in regard to the Catalpa as a timber tree, and, as it would appear from very recent information, Prof. C. S. Sargent has directed attention to it, and spoken highly of its value and urged its cultivation for that purpose. It appears, however, that its importance as a timber tree was known half a century ago, and its culture recommended. In June, 1831, General Harrison delivered an address before the Agricultural Society of the county of Hamilton, Ohio, in which he spoke of the Catalpa as follows: "Our old rail fences, whose dilapidated appearance produces such a disagreeable effect around our farms, are as wasteful and expensive as they are inefficient, and the increasing price of timber and the great quantity of which will be required demands speedy improvement, for the country is likely to soon lose material for their construction. If we could procure posts and rails of the Locust or Mulberry they would last, without doubt, a great many years; but the wood of the Catalpa, a tree of such easy culture and of such rapid growth, furnishes, perhaps, a material much more durable than either of the others. This valuable tree is indigenous in the lower or southern part of Indiana, and grows to a very large size upon the Wabash River and several of its tributaries. Its property of resisting decay has been sufficiently verified in the vicinity of Vincennes, where the soil is saturated with water. One of these trees was cut down on the little stream of the Detha, five miles from Vincennes, before there was any immigration from other States. It was certainly a giant in the year 1785, when a colony of Virginians from the Southern Potomac settled there, and this Catalpa served for a foot-bridge for crossing the river. I have been informed by a worthy man, in whom I place great reliance, that he has recently seen this tree, and found it but slightly injured from the moisture; and he assures me at the same time that a fence built with posts of the Catalpa which had been set in the ground in 1770 by his father, had been recently taken up and reset on his own farm; it had been found yet perfectly sound, and quite as good for the purpose as those which had been put down to take its place. The Catalpa is a very beautiful ornamental tree, but I do not think it is appreciated or has been employed as a timber tree elsewhere than in the neighborhood of Vincennes. It grows with remarkable vigor, and I believe that in places where timber is scarce and the soil suitable to its growth, it offers very great results, not only for fencing, but for the construction of all kinds of buildings."—[Exchange.]

HOME-MADE SUPERPHOSPHATE.—Take one hundred pounds of ground bone, place it in a large tub, and apply 40 pounds of sulphuric acid, adding water as desired. In a few days the whole mass will be reduced to a consistency of thick jelly. Then add more water and about 300 pounds of plaster as a drier, the whole being worked and shoveled over until it can be readily handled. There will then be sufficient phosphate to apply to about 2½ acres of land at a cost of about \$7.50.

VEGETABLE MARROW JAM.—It may not be generally known that the vegetable marrow, when grown too large for us: as a table vegetable, may be converted into an excellent preserve—quite equal to that made of some fruits; and as a crop of vegetable marrows may usually be relied on, even in the smallest gardens, while our fruit crops are so capricious, it is well to have a vegetable product to fall back upon in cases of emergency. Peel and take out the pith and seeds of the marrow, cut it into pieces, and to each pound of marrow add one pound of sugar and one lemon with the juice squeezed out and the rind cut up similar to orange peel in marmalade; boil the whole together for two hours and an excellent jam will be the result.

A convenient and cheap safety tie for cattle has been patented by Mr. Merrill J. Worth. A cylindrical stanchion bar, secured at top and bottom, is provided with two rings that encircle it. A metal rod of suitable size and shape has a loop at one end which incloses the upper of the rings, and the lower is formed into a hook to engage with the lower ring of the bar. The hook is provided with a spring catch. From the upper stanchion bar, a short arm depends that is provided with a pin upon which the hook of the bow is placed when the animal is let out of the stanchion. With this construction the animal tied is restrained in the least possible degree.

The Dairy.**Canada and the Cheese Trade.**

The course of the cheese trade in New York during the present season has been a puzzle to dealers in that city. Starting off with an exceedingly light make in the early part of the season, as compared with last year, at one time it had only just caught up with that of last year when it rapidly fell off again, and it was argued that such a shortage ought to put up the price of cheese considerably above what it was then bringing. But for some reason there seemed to be all the stock in market for which there was any demand. Shippers were indifferent, and would take cheese only at their own prices; and whenever the market seemed to be pretty well cleared up, and buyers paid somewhat higher prices in the country, under the belief that the situation would warrant it, they have been caught nearly every time, and lost money on the venture. In fact there have been few weeks during the present season when buyers have succeeded in making a profit. The dullness of the foreign market has been the general subject of remark. From the first of May to the first of September the shipments of cheese from New York have been only 1,053,670 boxes this season, against 1,433,941 boxes for the corresponding time last year. This is a falling off of 380,271 boxes, or more than 25 per cent., and is 310,392 boxes less than were shipped in the same months of 1881. It is also true that the receipts in New York are lighter than they were in either of those years, but the difference is far from being as great between the receipts as between the exports. Besides, that only aggravates the case, because if the receipts had been larger, there would either have been more stock left over, or prices must have declined materially in order to dispose of the stock.

The question naturally arises, what is the cause of this apathy in the foreign trade? Has Great Britain stopped eating cheese? Or is she making so much more at home that she does not want ours? A recent visit to Canada has furnished the writer with what seems to be a clue to the anomaly of this situation.

The Province of Ontario has long been noted as a large producer of cheese. This cheese finds its general outlet at Montreal, and that city is the one great shipping port for all Canada. Previous to this year the exports from Montreal have averaged about 25 per cent. of those from New York. But lately the Province of Quebec has also been awakening to the profitableness of dairying as a business. The rural population of this Province is chiefly French, and strictly under the control of the Roman Catholic church. And it has been the rule of that church to require from the farmer one-tenth of the principal products of his land. The list of products which are thus tithed by the church was long ago completed, as it was not thought that any new article of importance would be likely to make its appearance. Cheese is not included in this list, and the farmer has just discovered that there is at least one product upon which he can lay by a little money. The result is that these factories are rapidly springing up all over the Province. A factory has even been established as far north as Chicoutimi, the head of steamboat travel on the Saguenay river, and we can testify to the excellence of its product from personal examination. The factories as a rule are plain and rough exteriorly, but they are furnished within all the modern appliances for making cheese. It will be remembered that one of the favorite industries of France herself is the making of dairy products, and it is natural for people of French descent everywhere to take to this line of work whenever circumstances favor it. We are told that within a radius of 75 miles from Montreal over 200 cheese factories have been built in a comparatively short time. Ontario is also increasing her make, and the consequence of all this is that Montreal has thus far this year shipped to England one-half as much cheese as New York, instead of one-quarter as heretofore. That this should make a difference in the demand for our own cheese is no more than natural, and that it has made a difference is shown in the decrease of our shipments, and the difficulty in sustaining prices notwithstanding the shortness of our make. The best of the Canadian cheese is not quite equal to the best New York State cheese; but the general run of quality is considerably better in Canada than here, and no skim cheese is made in the Provinces.—[Utica Herald.]

Winter Dairying.

It is more advantageous for the cow to come in in the fall than in the spring; the average farmer manages to carry his cows through the winter on hay alone, or as little feed as will possibly do, to bring her on grass in a passable condition in the spring. By this time factories are opened and commenced operation. The spring-milked cow does her best, but the flow of milk is not satisfactory, and as a rule she loses in condition, notwithstanding the extra feed, such as meal, bran, etc., she may be favored with, for grass is relaxing and a great change from dry hay. It is an undisputed fact that it is very difficult to hold the conditions up in early spring, especially while giving milk and poorly wintered. As the season advances, the cow recuperates some as the grass matures, but by this time flies are troublesome, another drawback, and the flow of milk is reduced; so when fall approaches, with dry and parched pastures, such as we often have, the farmer will resort to feeding such as green corn, ground feed, etc., to bring the flow of milk up to its standard once more. Now, we claim this cow is past reclaiming, or, in other words, never can be brought back to her full flow of milk at this season of the year. It matters not how good the food is, if we are feeding dry cows at this time of the year with green corn, after running dry for three months, as they should do, having this time for recuperation on grass, they are as a rule in good condition. Now the change is more gradual as the winter approaches. The cow drops her calf any time from November 1st to January 1st in good condition and good heart. Now, the extra food she receives will enable her to continue her flow of milk till spring. Beginning on grass, she is in extra good plight, will begin once more to renew or increase her flow of milk, and thus continue until fly time, when she ought to be near dry. Many arguments are advocated that it does not pay to feed cows extra in winter, as the milk will not balance the cost. This cow must be wintered, and the more cheaply it is done, the more dearly will she cheat her owner, and it matters not whether she is dry. The extra food given to fall-milked through the winter pays in many ways. Cows are machines, and just as we run the machine we will be remunerated. You may, for example, look at the herds of cows that are run for winter milk, and the herds that are run for summer milk, and you invariably find the herd that milks through the winter is in the best condition, and they always will be.

It is better for the farmer. In fall and early winter farmers' work is completed and there is time to devote to the cows. The hurrying of haying and harvesting is past, men and teams are idle. The dairyman that has run his herd of cows through summer is receiving very little income, if any at all. What does he do? Takes a rest and lets expense eat his summer income up. On the other hand, the dairyman that runs a winter dairy has not only paid expenses through summer, but is now realizing an income and a good profit from his investment.

The demand for fresh-made butter is increasing, people's tastes are more fastidious, and we are educated to a higher standard; they are willing to pay any price for choice, fresh-made butter, while streaked, summer-made butter is shaved and a drug in the market. The old accustomed practice of making summer butter and holding for winter use is one of the things of the past. The dairyman must accommodate his mode of operations to the qualified tastes and interest of the consumer. Until this is done the dairy interest of any state will be on the retrograde, non-paying plan. Now, if we milk our cows nine months of the year, when is the best and most profitable time to have them come in? We answer, in the late fall or early winter. Milk can be produced as cheaply and with much more profit realized by milking in the winter months than in the summer months. As we stated before, better for the cows, better for the man, by way of saving time and labor, better for the man's pocket. Fine flavored butter can be made, and as much or more per one hundred pounds of milk. All we want is the man fully up to the advanced stage of dairying, and he will have early cut cow fodder in abundance, and have a silo to cure the same, early cut and well-cured hay, warm, comfortable barns, and he will see how to best fill his pockets.

The expense of winter feed has been materially reduced since silos have come in use. Milch cows can be kept cheaper on ensilage and a little grain than dry cows can generally on their accustomed fare. Experience has demonstrated the fact that

cows will do well, their milk be abundant and make excellent butter with the above-named feed, and our expectations in the future are governed by the past. The prices of all dairy products are high through winter months; milk can be more easily handled, and is in fact more easy to protect against cold in winter than heat in summer. After all the butter is taken from the milk a very fair article of cheese can be made, thus utilizing the whole milk. There is a greater safety and more conveniences in marketing this time of the year. Many dairymen know to their sorrow how losses will occur in transportation through the hot months. Thousands of dollars are lost in this one thing alone.—[G. Lawrence, jr., before Wisconsin Dairymen's Association.]

It is refreshing to read of the journeys and lectures of a Travelling Educational Dairy through parts of Ireland, including districts from which we have had horrifying accounts of boycotting and butchery. The staff consisted of a lecturer (an Englishman), an Irish dairyman—John—in neat white jacket, and his wife—Ellen—in a dainty holland dress, both well gifted with brogue and bright in looks. They were aided at times by "pretty Maggie Doyle," a deft handler of the pats of butter, which were made large or small in proportion to the demand and sold at the rate of two shillings per pound. The churn and other utensils were, of course, of the most approved pattern, and each day about 16 gallons of cream were worked up morning and evening, the lecturer explaining the reasons for each step, and especially for the divergencies from old custom. Cleanliness and system were foundation rules. A very interesting part of the proceedings everywhere was the conversation allowed after the lecture, and curious were many of the questions asked. The explanations and practical illustrations seemed to be well appreciated and observed with intelligent interest. The dairy was invited to many different places by some of the large landlords.

Veterinary.

Worms and Indigestion.

When worms have developed in great numbers in any part of the intestinal canal, the functions of the digestive organs become interfered with; the horse gradually falls off in condition, in spite of a frequently ravenous appetite; occasional symptoms of colic may appear, the flank is tucked up, the coat becomes staring, the inside of his eyelids is pale, and he easily becomes fatigued by ordinary work. There are numerous recipes for the extirpation of worms, the vegetable and mineral kingdoms having been ransacked for vermifuge agents. Some species of internal parasites are more easily expelled than others; but the fact remains that, although we can force all sorts of "pizen" down a horse's throat, we cannot force the worms to receive it. Calomel, arsenic and other heroic remedies we do not recommend, because the use of these is apt to be followed by serious consequences. The simple vegetable bitters, such as wormwood, rue and quassia, have been found to act beneficially by inducing a healthy state of the digestive organs, and act by their being offensive to worms. Sulphuret of iron, and also the finely-pulverized clinkers of the blacksmith, have been occasionally resorted to as anthelmintics. The salts of iron have certainly much that recommends them to our notice as agents for destroying internal parasites, since the existence of worms mostly depends upon a peculiar debilitated state of the system, and this being overcome, the tissues cease to become fit nidus for their development and maintenance. Few substances can compare with the compounds of iron for restoring tonicity. Besides they act as poisons to all the tribe *vermes*. Yet it becomes a question if a more definite and certain compound should not be preferred to either of the two last-named agents, such as the sulphate of iron, or the carbonate of iron, either of which may be given in a powdered state, in doses of one drachm, or a teaspoonful, daily, mixed among the food, during one or two weeks.

The following is a good recipe for worms in horses:—Powdered poplar bark, two ounces; powdered sulphur, four ozs.; salt, three ozs., mixed well. Divide the mass into twelve parts, and mix one with the food every night. This will not only remove worms, but also tone up the digestive organs, so that the parasites cannot find a foothold.—*Exchange*.



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 open and postage will be only 1c. per 1/2 ounce. We do not hold ourselves responsible for the views of correspondents.

SPECIAL NOTICE.—We receive numerous communications to which no names are attached, and asking for very lengthy and full information without enclosing stamps for reply. We require that the name of the subscriber should be signed, not necessarily for publication, but as a guarantee of good faith. Letters sent without conforming to the above, find their way into the waste paper basket.

Raspberries Affected with Disease.

SIR.—The Antwerp Raspberry, which is cultivated to some extent in this vicinity, has proved almost a total failure this season. The old canes commenced to die one after another soon after raising in the spring, and have been dying in all stages throughout the season. The new canes in the meanwhile are growing finely. The disease has shown itself upon the plants other seasons, but only slightly. We cannot account for it. Any information of cause of disease or remedy for it, in your accommodating paper, will be considered a great favor. In view of failure, what varieties of raspberries may take the place of the Antwerp, being as hardy, as prolific, and as durable for shipment? Will some of your readers, who have had experience with "Hay Caps," kindly inform us if they are profitable, and what is suitable size, material and form? We were hindered greatly in haying by fogs, and perhaps "Hay Caps" might assist us to make better time and better hay as well.

R. W. W., Clifton, N. B.

[Your description of the disease affecting your raspberries is not explicit enough to receive a definite reply. Do the canes commence to die before they bear fruit? Their dying after they have fruited would be quite in the usual course. The canes of raspberries of all varieties are biennial. They are produced one year, bear fruit the next year, and then die, young canes having grown up from the same stock to perpetuate the supply of the species. The canes, when they have matured their fruit and the leaves become withered, should be cut down, thus giving more space and freer air to the young canes that are growing up to take their place. Then in spring the young ones should be shortened. This pruning will make them more "stocky" and they will bear better and more fruit. "Varieties to succeed the Antwerp."—There are many good varieties to select from. The Blackcap (The Gregg), of which there is an illustration in this issue of FARMER'S ADVOCATE, is highly recommended; Cuthbert, Turner and Philadelphia have also been found very profitable. The diseases affecting the blackberry are the rust and blight, and are found mostly where cultivation has been neglected.]

SIR.—I have a flock of sheep that is going back on me in spite of my best care. For the last sixteen years I have never sold or killed my best lambs, always keeping the best to breed from. They are getting smaller in size and dirtier nosed, and some of them cough badly. Inform me through the ADVOCATE how to treat them. It may benefit others.

[Get a fresh ram; put plenty of sulphur with their salt and tar their noses well, but your flock wants changing; even change of pasture will be beneficial.]

SIR.—In selecting breeding animals care should be taken to secure as few weak or defective points as possible, rather than the aggregate of strong points. A first-class animal can only be obtained by mating animals having the average of good points, that is the good points should strongly over-balance the weak or defective points. It is a waste of time and hard cash to improve one portion of the animal structure at the expense of another.

J. H. S., Logan, Ind., U. S.

SIR.—Will you please reply to the following through answers to correspondents of your valuable paper: 1—I enclose a grass for name; please state whether it is an annual, perennial or biennial; also if it would be worth propagating, and time for sowing. 2—Your opinion of the following grasses for hay and feeding and pasture purposes, viz., lucerne, blue top, orchard, Kentucky blue grass, rye grass, fescue, or what grasses would you recommend for the above purposes? Also, time of seeding and quantities per acre, and if they would require to be sown with fall wheat or other grain, or by themselves. By replying to the above you will greatly oblige.

B. A., Lucknow, Ont.

[The grass sent for name is the *Paricum crus-galli* or Barn-yard grass. It is an annual, and not worth cultivating. 2—Lucerne is one of the most productive plants for forage, and will bear several crops in a season. Its relative value as compared with clover is decidedly inferior, while its absolute value per acre is much greater. For the first season it requires careful cultivation to be kept free from weeds till it occupies the ground. It may be sown broadcast or in drills; if the former, 25 lbs. per acre, if in drills (say 12 inches apart) 15 lbs. per acre will be sufficient. Orchard grass is indigenous, and for arable soils, especially such as are shaded, is one of the most profitable grasses grown. It should be cut before ripe, otherwise it will become coarse and hard, and is less acceptable to cattle. After cutting it immediately springs up and furnishes constant pasture throughout the season. Kentucky blue grass, or June grass, is highly esteemed both for hay and pasture. It is seen in its highest perfection in strong limestone soils. A warm, dry calcareous soil seems to be its natural element, and it flourishes best on rich uplands. Rye grass yields indifferently with us, and is easily winter killed. The Fescues are all good pasture grasses, but are not extensively cultivated in this country. A judicious mixture of these grasses would be excellent either for pasture or meadow. For hay alone timothy is much preferred in this country. A mixture of timothy with other grasses for pasture will give a valuable variety of food. In laying down land to grass the plants must be suited to the quality of the soils. Some delight in moisture, some succeed best in clayey soils, others in those of a loamy kind, some on peaty soil, and a few in the calcareous sort. A good mixture for permanent pasture for a rich loamy soil would be—orchard grass, 6 lbs.; hard fescue, 3; meadow fescue, 3; June grass, 3; timothy, 6; perennial red clover, 6; white clover, 3; perennial rye grass, 3. Good farmers prefer sowing in spring without grain. The land should be thoroughly prepared and brought into as fine a state of pulverization and mellowness as possible, before the seeds are sown. For the seeds can neither be sown with regularity nor establish themselves so effectually when the surface is in a clotted lumpy state. A light seed harrow or brush harrow should be used after sowing. If any doubts exist about the quality of the seed a much greater quantity should be sown than we have recommended. A light wooden roller could be used to advantage.]

SIR.—Enclosed you will find a package containing a bug which seems to be a wheat pest. I sent to the United States for a sample of wheat I saw advertised in a seed journal, and it was eaten by this bug I enclose to you. I should like to know what it is called, and if destructive to the wheat crop, to give warning to all wheat growers against buying seed from other countries without the most strict care as to its being free from destructive insects.

J. B. S., Norham.

[The insects are specimens of the grain weevil of Europe, *Sitophilus granarius*. This insect devours stored wheat and other grain, and often proves very destructive in granaries. The insects may be destroyed by kiln-drying the wheat.]

SIR.—We prize the paper very much, and could not do without it. Can you give me any information about millet, its uses and best manner of culture?

E. C. N., Brighton P. O.

[On page 159 of last June's issue of this paper there is an article on Hungarian grass, which is applicable to millet.]

SIR.—Enclosed find a weed; it has a blue flower, resembles a garden pink; grows as high as three feet; leaves at the ground before the stalk grows up resemble dandelion.

W. T. S.

[It is chicory.]

Raising Forest Trees from Seeds.

It is a good general rule to sow seeds of all kinds as soon as they are ripe. They will vegetate sooner if sown immediately after being gathered from the plant than they will do at any future time. Exposure to the air hardens the outside covering of seeds, which has a tendency to retard germination; so that whether a seed will germinate in one week, one month, one, two, or more years after it has been put in the ground, will depend very much upon the amount of drying and exposure to the air that it was subjected to before it was sown.

But it is not always practicable or convenient to sow seeds immediately after they are ripe and have been gathered; therefore, the alternative is to try to preserve them in the best manner so as to retain their vitality unimpaired, so that they will germinate as speedily as possible when sown.

There are many seeds which ripen during late summer and in the fall, which cannot very well be kept during winter without more or less deterioration. Some, such as the silver maple, red maple, elm and poplar, ripen early and will not keep well; these should be sown as soon as ripe, and they will probably grow to good sized plants before the growing season ends. Silver maples may be had from three to four feet high by December from seeds sown the preceding June. Among those which do best when sown in the fall, or immediately after they are ripe, are the seeds of the peach, cherry, sweet chestnut, hazelnut, walnut, hickory, oak, horse chestnut, beech, linden.

If these cannot be sown in the fall they must be kept over until spring by mixing them with sand, or dry earth of any kind, and kept in a cool place, such as an open shed or a well-ventilated, cool cellar; if kept in a warm place they will not be in such good condition in spring as when kept quite cold and slightly moist. Sometimes acorns and the various kinds of nuts will keep in fine condition by spreading them thickly on the surface of the ground in the open air and covering them over with four or six inches of earth or sand.

Small seeds, and those that are light and chaffy, such as seeds of the alder, birch, sycamore, catalpa, tulip tree and mulberry, as also some of the later ripening winged seeds, as the sugar maple and the various species of ash, should be gathered when ripe and spread thinly in an airy situation, to partially dry, after which they can be stored in coarse bags and kept in a cool, airy room until required for sowing in spring. Larch, pine and generally seed of all coniferous plants, should be kept in a similar manner during winter.

To succeed in raising plants with a good root system, it is essentially necessary that the seeds should be sown in deeply-worked, light, loamy soils. Clayey soils are not to be selected, as they too readily harden on the surface and form an impervious crust, so far as relates to the pushing power of the young germs. Where no other soil is available except a clay, we have seen good results attained by covering the seed with sand; there is nothing in a clay soil to prevent growth when once the young plants show themselves above the surface. The soil should not only be deeply worked, but it should always be made as rich and fertile as possible. In general there is altogether too little account made of this primary requirement, and very many of the failures in first attempts in the cultivation of specialties, such as that of raising trees from seeds, may be clearly traced to carelessness in the selection, preparation, and enrichment of the soil.—[Rural World.]

A correspondent of the *Rural World* says: "We noticed that a tree standing in the immediate vicinity of our dwelling had all at once put forth with renewed energy, and we were at a loss for some time to define the cause. On examination we found that a quantity of lime, which had accidentally been spilled and rendered worthless by becoming mixed with the refuse on the stable floor, had been put at the foot of and around the tree. Taking the hint from the accident, we purchased twelve casks of lime and applied half a bushel to each of the trees in our orchard, and found that it produced immediate beneficial results, not on the health of the tree only, but the quality of the fruit was also greatly improved. This application will be especially beneficial in soils where there is a redundancy of vegetable matter."

Dutch Flower Roots.

This comprises the class of plants well-known as the hyacinth, tulip, crocus, snowdrop and others so universally esteemed for their fragrance, beauty and facility of cultivation. There is no class of plants so useful for winter decoration as this, flowering as they do in a season when all vegetation is at a standstill and nothing to greet the eye but a dreary and barren waste, instead of the pleasant garden of the past summer.

There are a great many different methods of growing these bulbs which render it all the more pleasant to the cultivator who can watch the various phases presented to his view, and add materially to his knowledge of plant lore. The soil necessary to the cultivation of the hyacinth in pots is well rotted cow manure and a good sprinkling of sand. Drain the pot by putting in a little gravel in the bottom, then a little moss or a few leaves to prevent the soil from getting through, fill the pot nearly full with soil, put in the bulb, press firmly down, then fill the pot, just leaving the crown of the bulb visible—water and put into a cellar or cover over with ashes, manure or soil, and leave them until the pots get well filled with roots, which will be from six to eight weeks. Bring a few of them into the house at a time, so as to have a succession of bloom, shade for a few days and gradually inure them to the light, after which they may be placed in the window, giving an abundance of air when the weather is favorable. Water freely with water of the same temperature as the room in which they are growing. A little ammonia or guano stirred in the water will be found very beneficial, increasing the brilliancy and more fully developing the flower.

To grow hyacinths in water, select the finest and strongest bulbs, giving preference to the single varieties, as they are earlier in blooming, sweeter in scent, more brilliant in color, produce larger flower spikes, and altogether do better in water than the double bulbs. Fill with pure water nearly to the top, just barely allowing the base of the bulb to touch, then put in a dark closet or cellar, for a month or six weeks, so as to induce the root growth so necessary for the proper development of the flower. Change the water as frequently as it becomes impure, first taking the bulb out and being careful not to destroy the fine fibres; wash the glass and fill same as before. When the glasses get well filled with roots and the bulbs started a couple of inches, it will be time to take them into the parlor, keeping them shaded for a few days until they become accustomed to the strong light. The great advantage derived from this mode of cultivation is that they will bloom mostly anywhere, whether in the window or on the bureau, or on the mantelpiece, and certainly much more ornamental than the common earthen flower-pot.

A gorgeous display may be made by filling a window box. Have a zinc pan made to fit, and plant it with, say a row of snow drops and crocus in front, then a row of double dwarf tulips, finally a row of hyacinths. Cover the pan as directed before, then when well started put it in the window box, and in due time they will come into bloom with a most gratifying result. There are a thousand and one ways to grow this flower. Take a common soup plate, place a half-dozen bulbs therein, and place between and over them some green moss, and they will do just as well as if they were in the finest piece of china; the roots interlacing will keep the bulbs upright.

To grow hyacinth in a garden the soil must be enriched by some well-rotted manure, dug in and thoroughly incorporated with the soil. Plant hyacinths about four inches deep, tulips three, crocus and snow drops two inches. A nice bed can be made by planting a crown imperial in the centre, surrounding that by polyanthus narcissus, next two or three rows of hyacinth followed by a row of double tourneisel tulips, then one row of Duc Van Thol tulips, and finally a row of crocus and snow drops. By planting in this way, the bulbs when in bloom will show to the best advantage, being graded in height from the crown imperial in the centre to the crocus around the edge. The late varieties of tulips had better be planted in a separate bed, as they grow taller and flower later. Planted where they can be shaded and protected from the sun and weather when in bloom, will be of great benefit in extending the period of blooming. About the first week of December, after a few slight frosts, when the ground will be a little hard, cover the bed with three or four inches of coarse stable manure, raking the same off again in the spring when all danger of heavy frosts is over.—[J. T., in Rural World.]

Farming for Boys.

BY THE AUTHOR OF TEN ACRES ENOUGH.

CHAPTER VII.

Visit to a Model Farm.—The Story of Robert Allen.—How to raise Horseradish.—No such Thing as Luck.

The disposition to go ahead which the boys displayed, as well as their aptitude for learning, were strong encouragements with Uncle Benny to continue his fatherly care over them,—to teach them that it was impossible to earn genuine manhood except by steadily and industriously serving out their boyhood. He found his own interest in all their little concerns insensibly increasing, and noticed also that even Spangler himself took constant observation of their doings, though he seldom gave a word of encouragement, but rather doubted whether their labors would ever pay a profit. He estimated results by their money product, not by their moral and educational value.

On the afternoon of a fine early-summer day the old man obtained permission to take them with him to a farm house some two miles off, for the purpose of showing them how a really good farmer managed his business. The boys had often heard of this place, and had many times walked by it, but had never ventured up to the house or over the grounds. It belonged to a Mr. Allen, and consisted of sixty acres. The history of this man was so remarkable, that Uncle Benny, thinking it afforded an example that ought to be impressed on the minds of the boys, took occasion, as they walked leisurely along, to relate it to them.

Mr. Allen was one of a large family of children, his father being a laboring man, so poor that he was glad to have them placed out wherever a situation could be found for them. No great pains were taken to see that the places were good ones, where a tolerable share of schooling would be allowed, or where they would be likely to receive a thorough agricultural education. The father was too poorly off in the world to be very nice in choosing places; besides, his children had had so indifferent a training at home, that whoever took them was quite certain that, if they were ever to do any good, they must be taught how to do it.

This one, Robert, was accordingly placed with a very penurious man, who allowed him very little time, even in winter, for schooling. His very name had a suspicious sound,—it was John Screwme. The poor boy was excessively fond of study, and had luckily learned to read well before he left home. He accordingly read everything he found about the house, and even carried a book of some kind in his bosom whenever he went ploughing. This he read and re-read when he paused to rest his horses, seeking to carry in his memory, while following in the furrow, the information he had obtained. It was so when not at work,—the same passionate desire to obtain knowledge occupying his time and thoughts. But his master's house was a very poor school in which to learn, with very few books or papers about. He therefore borrowed from the neighboring boys all that they were able to lend him.

But this supply was insufficient for his wants, as he had become a rapid reader. He had the great good sense to understand that it was important for him to qualify himself, while young, for the business he was to pursue in after life,—that of farming. Hence he sought for books on agriculture and natural history, but few of these could be obtained.

His master was a widower, with an only child, a daughter, whose temperament was directly the opposite of her father's. She was as fond of cultivating flowers as Robert was of reading books. Her father had indulged her by subscribing for an agricultural paper, which came once a month. From the reading of this he derived so much information, that he never afterward permitted the subscription to run out.

Among other useful things, it taught him how to manage bees. So he bought a colony, and, being extremely observant and careful, he gradually multiplied them until the product amounted to twenty or thirty dollars every year. His master made no objection to his doing this, as the bees consumed only such food as would have been wasted had they not gathered it from the fields and flowers. In this bee culture the daughter, Alice, assisted him very materially, giving him prompt notice of a swarm coming out, and sometimes even assisting him in getting them safely into a new hive. Several times, from the profit of his honey, he was able to present her a handsome book at Christmas, and, on more than one occasion, a new bonnet. His bees thus made it a very easy matter

to pay for his weekly paper, as well as to keep himself supplied with numerous new works on his favorite studies.

As might be expected, such a boy was always observant of whatever was going on around him,—of everything from which he could get a new practical hint. Having on one occasion gone to the city to dispose of his honey in the market, after he had pocketed his roll of notes, he strolled leisurely through the long building, from end to end, to see what others had brought there to sell, as well as to learn what prices they were getting. But he saw nothing that attracted his attention particularly, until, on coming out at the lower end, he noticed an old man with a very rude machine resembling that of a perambulating scissors-grinder, having his foot on the treadle, with which he was driving some kind of a mill. He stood quite a long while looking at the machine, endeavoring to ascertain what the old man was doing. While thus standing, several women and children came up in succession, with little cups in their hands, into which the old man measured a gill or two of a white, pulpy preparation, for which each buyer paid him a few cents. It struck him that the old man must be grinding this pulp; so, coming close up to the machine, he at once perceived a strong odor of horseradish. It was this the old fellow was grinding; and Robert saw that he had customers for it as fast as it could be produced. He had seen in the machine-shops many great machines, but this was truly a *grater*.

Now he understood all about raising horseradish, and knew that it could be grown more readily even than potatoes; but never having seen it anywhere except on his employer's table, he had no idea that a large quantity could be sold, and hence was greatly surprised at finding how quickly it went off in the market. He immediately inquired of the old man how much he gave for the roots, of which he had a bushel or two in baskets near him. He replied, two dollars a hundred for the smaller ones, and three or four for the largest; adding, that he would buy as many as he could bring him.

The boy was so elated at this unexpected discovery of something that was in his own line, that he asked no more questions. But that evening he looked over all the old numbers of the agricultural papers in the house, to see if they contained any information about the cultivation of horseradish, what was the best soil, whether there was a superior variety, or any other instructions to guide him in undertaking what he shrewdly thought he could make a profitable operation. He found a dozen articles on the subject, which contained the experience of practical growers, with minute directions how to plant and cultivate, as well as how to harvest a large crop, and where to find a market for it. He had seen these articles before; but as his mind was not interested in the subject at the time, he gave them only a passing notice. But now that his attention had been directed to it, he discovered in them an almost priceless value. They were exactly what he wanted, and he read them over and over. He made up his mind that, if he had inquired of every farmer in the township how to cultivate so simple a thing as horseradish on a large scale, not one could have told him half as much as did these old numbers of the agricultural papers he had been preserving.

Here Uncle Benny took occasion to remind the boys that it was impossible for a man to be a really good, progressive farmer, without not only having a full supply of the best agricultural papers, but diligently studying their contents, as well as preserving the numbers for future reference. He said they were full of sound advice and instruction, and kept their readers informed of all the new seeds, plants, machines, and breeds of animals, as they were either discovered or introduced. It was only by having his eyes and ears open to these things, that a farmer could get along successfully, and keep up with the best.

He went on to tell them that Robert, discovering that a deep, rich soil was the best for horseradish, immediately made up his mind that the very place for him to plant it would be by the side of a long ditch in the meadow, which had been cleaned out that very fall. As the ditch-bank could not be used for any crop,—at least his employer was not the man to put it to any useful purpose,—Robert easily obtained his permission to plant it with horseradish. He would have refused anything that he could use himself. As may be supposed, Robert thought of this matter the whole winter, and was impatient for spring to come round, that he might make a beginning. At Christmas he went to the city and engaged from the old man in the market as many of the lower ends of the horseradish roots as he

would need. On measuring the ditch-bank, by pacing it off, he found he could get in three rows containing altogether two thousand roots, and so contracted for that number at five dollars per thousand. The old man had been in the habit of throwing away these "tails," as there was no steady demand for them, and was glad enough to find a customer.

When April came, Robert put the ditch-bank in order with his own hands, doing most of the work by moonlight, and then actually planting the roots by moonlight also, as his employer would not spare him even a half-day for himself. The roots were about five inches long and were planted in rows. Holes about eight inches deep were made in the ground with a sharp stick, into which the roots were dropped, thus leaving them a few inches below the surface. It was a long and tedious job for a boy like him to undertake and go through with, but he was full of ambition to do something for himself, and this was about the only chance he saw. Then during the whole growing season he kept the ground clear of weeds, and frequently stirred it up on the surface, all which greatly promoted the growth of the plants. They threw up such luxuriant tops, that by midsummer they shaded most of the ground and smothered a large portion of the weeds. All this attention to his horseradish bed was bestowed at odd times.

But he was well rewarded for his labor, as at the close of the season he had a fine crop of roots. They were so large, and there were so many of them, that he was obliged to hire a man to dig them up and wheel them to the house. His employer had paid no more attention to the crop during the summer than he had to Robert's bees; but when he came to see the splendid result of his labor, he was astonished at his success, and told Alice to help him wash and trim them up for market. This she was willing enough to do, as Robert's tastes and hers were so similar that they had long been close friends, ever ready to oblige each other. By devoting one or two evenings to the task, the roots were made ready for market. There Robert was allowed to take them, and there, sure enough, he found the old man at work in the market-house with his machine, still grinding out horseradish for a large circle of customers. He sold his crop for sixty dollars, and was so delighted with his success that he treated himself to a new coat.

He also bought for Alice, in return for the help she had given him, a neat little dressing-box, containing trifles which he thought would please her, for there was not a particle of meanness in Robert's disposition. While he was ambitious, and industrious, and saving, he was far from being stingy. Besides, he had already learned that pleasure was reciprocal, and that no one feels it who does not at the same time communicate it; for to be really pleased, one must be pleasing to others. As he saw that Alice was gratified by his thus thinking of her, he was abundantly gratified himself.

This purchase of a new coat was a clear saving to Mr. Screwme. He was pleased in turn, thinking how much he had saved, and readily gave Robert permission to use the ditch-bank as long as he desired, as his horseradish farm. Thus the industrious fellow was encouraged to look ahead, and a bit of waste land was in a fair way of being turned into a productive one, by the shrewdness and energy of a mere boy. Taking all the land on the farm, there was not an acre that produced more clear profit than this, though the rest had had twice as much labor in proportion bestowed upon it.

Still, the owner did not take the hint thus given to him, and try what could be done on a larger scale. The reason was, that raising horseradish was not regular farming,—it was something out of the usual line,—well enough for a boy to amuse himself with, but not the kind of farming he had been brought up to. Another reason was, the neighbors would ridicule him. In truth he was not a wise man, for wisdom is not the mere seeing of things that are actually before us, but consists in discerning and comprehending those which are likely to come to pass. He would have thought it all right for him to plant an acre of cabbages, because it was done by others; but an acre of what he considered a new farm product, such as horseradish, was too great a novelty, though he saw that the crop paid well. Nor was he sufficiently wise to see that the time was coming when a plant so easily cultivated would be grown upon fields as large as any of his.

Thus Robert was left in undisturbed possession. He started the second year under better auspices, as, in trimming his roots for market, he had cut off and saved the lower ends for another planting.

This would save him ten dollars, besides affording him not only better "sets" than he had begun with, but twice as many. He thought that he would double his crop by planting both sides of the ditch. On asking permission of his employer, he readily gave it, adding that, if he choose, he might plant the bottom of the ditch also.

The boy's ambition seemed to have won some little sympathy from his master; for, when planting-time came the next spring, he actually assisted Robert by ploughing up the ground and putting it in order for him. Then, as Robert made the holes in the ground, he called on Alice to drop the roots into them, as she was quite willing to do. With this help he got on finely with his double crop. But he was obliged to hire a man occasionally during the summer to keep the ground in order, as he knew it was never worth while to set a plant in the ground and then neglect it. But he had the money with which to pay for such labor. Still, it cost very little, as to his ditch-banks was devoted all the spare time he had. His bees gave him no such trouble, as they took care of themselves. The better preparation of the ground caused a quicker and larger growth of the plants, and of course there was a better yield than that of the first season. He sold the second crop for more than a hundred dollars, and could have disposed of three times the quantity. That season his honey sold for over twenty dollars.

Most of this money he saved, spending very little except for books and papers, all which he studied so assiduously, that, by the time he came of age, he was one of the best-informed young men in the neighborhood, with a respectable library about him. He was a fine, handsome-looking fellow, of pleasant manners, steady habits, and, besides all this, had more than four hundred dollars, all made from the profits of his bees and horseradish.

"You see, boys," said Uncle Benny, "how much can be accomplished, from the very small beginnings, by a boy who has ambition, good sense, and industry. But all these acquisitions, especially the mental ones, come from application. It is the price that every man must pay for them, and they can not be had without it. To expect good results of any kind without application, would be as absurd as for you to hope for a crop of corn without having planted a hill."

The old man went on with his story. He told them that, when Robert came of age, he was able to manage the farm far better than his employer had ever done. He continued to do the principal work until he was twenty-three years old, at which time his employer died, and a year after that he and Alice were married.

"Now," continued the old man, "the farm we are going to see is the same one on which Robert Allen began life as a poor boy. All this happened years before you were born, so that you will see great changes from the condition of the farm as it was in the time of Robert's boyhood."

The boys listened to this story with profound attention. It ran so nearly parallel to the current of their own thoughts that they could not fail to be struck with it. They had seen Mr. Allen very often, and two of his sons had been their companions at school; but they had never before had the least inkling that so wealthy a farmer had sprung from so small a beginning. The farm, therefore, as they approached it, acquired a new interest in their eyes, and they surveyed with increased attention whatever belonged to it.

A few steps further brought them to the gate, which opened into a lawn of moderate size, in which were pear and apple trees many years old, now gorgeous in a profusion of bloom. These living monuments of the thoughtfulness of a former generation had been carefully trimmed of all the dead wood, and their trunks had been whitewashed. Indeed, the fences, the out-houses, and every spot or thing to which whitewash was appropriate, shone out gayly and cheerfully in a coat of brilliant white. A dozen large stones, that lay about in the edge of a luxuriant border near the house, had been brushed in the same way, presenting a beautiful contrast with the rich green of the early spring grass. Even the projecting stump of an old apple-tree, that had once stood in the lawn, held up its slowly decaying head in all the glory of a similar covering.

The stone dwelling-house, evidently very old, but very comfortable, had shared in the same beautifying application. Its ancient doors, and sashes, and shutters had been replaced by new ones of modern finish. For the old roof there had been substituted a new one, with projecting eaves and ornamental-brackets. The whole aspect of the premises struck the visitors with admiration of

their trimness and cleanliness, while a more practised eye would at once set down the owner as belonging to the higher order of farmers.

As they turned a corner of the house on their way to the rear, they were met by Mr. Allen and his two sons, the schoolmates of the Spanglers. Greetings being cordially exchanged, the visitors were politely invited into the house; but Uncle Benny replied that he had brought his boys with him to see what there was out of doors, and that he would like them to learn for themselves how a good farmer managed his business.

"Ah," replied Mr. Allen, "it requires a man superior in one way or another, to be a really good farmer."

"But," rejoined Uncle Benny, "men are estimated by their success in life, and, by common consent, success is held to be evidence of superiority. You are known as the luckiest man in the township."

"But I don't believe in luck, Uncle Benny," replied Mr. Allen. "It was not luck that made me what I am, but God's blessing on my labors, from the time I was a poor boy up to the present hour."

They walked forward to the barn-yard. The fences round it, and all the adjacent buildings, had been newly whitewashed. There were gutters which carried away from every roof the rains that fell upon it, and led them into a low spot a long distance off, to which the pigs had access as a wallow. The barn-yard was shaped like an earthen pie-dish, lowest at the centre, so that no liquid manure could run away. The bottom had been scooped out and furnished with a coat of clay nearly six inches thick, so that no liquor could soak away into the ground. There was but a single outlet for the fluid, and that led into a capacious cistern, connected with a pump, by which the contents were raised into buckets and used on the garden close at hand. This had been in operation only a year or two; but Mr. Allen described the result on his garden products as almost incredible, and he should use the pump and cistern more frequently than ever. "This liquor," he said "is what a plant lives and grows fat on, just as a pig grows on what you give to him. If I were able to manure my whole farm with these juices of the barn-yard, I would saturate the manure-heap until the water came away colorless, and spread it over the ground."

As the Spangler boys heard this, they looked up to Uncle Benny in a very knowing way, evidently recognizing the words of this excellent farmer as conveying the identical lesson the old man had taught them at their own squalid barn-yard.

There were a dozen head of cattle in the yard, fine, portly cows, of quiet mien and buttery promise. They had all been born within its enclosure, and had never been allowed to go beyond its limits. During the growing season all their food was cut fresh from the fields, and brought to them regularly three times a day. This arrangement cost additional care and money, but it saved some hundreds of dollars' worth of fences, while it trebled the products of the barn-yard. It saved acres of clover from being trampled down and wasted, thus enabling the land to feed double the number of cows. The abundant yield of butter found a quick market.

From this spot they were taken to the pig-pen, and there they saw the Suffolk and Chester County breeds, all in clean quarters, with warm shelters covered from the rain, the outer part of the enclosure strewed with an ample supply of cornstalks and other litter, which they were rapidly grinding up into the most valuable kind of fertilizer. Bill Spangler, having a particular home-feeling for the pig-pen, examined the animals in this enclosure with the greatest care. The others were equally interested. Though they noticed how complete the pen was, and how superior were all its arrangements to their own, yet, after a long and close survey, Bill could not help exclaiming to the Allen boys, "There's no sow here equal to our Nancy!"

(To be Continued.)

A young man named David Robinson was sentenced to one year and eleven months' imprisonment in the Central Prison recently for selling a glandered horse to a neighbor in Raleigh. The animal was ordered to be shot nearly a year ago, but was concealed, and only discovered about the first of the month, when it was killed and the law-breaker arrested.

Read our fall campaign advertisement, and if you can spare a few hours, obtain a few new subscribers and secure some of our valuable prizes.



"Home, Sweet Home."

The Household.

On Sleep and Nervous Unrest.

BY A FAMILY DOCTOR IN CASSELL'S MAGAZINE.

There is, in this busy little island which the Briton calls his home, a very large proportion of human beings—many of them well enough off, pecuniarily speaking—to whom the world is all a worry, and life a long-continued fever. People of this class are not invalids in the strict meaning of the term, although they oftentimes suffer far more than the generality of invalids. Pleasures they never know; hard work is a weariness; and yet they are unable to enjoy their leisure when they obtain it. Their symptoms, mentally and bodily, taken collectively, constitute a disease which, for want of a better, I designate by the name of nervous unrest.

A person so suffering does not consider himself ill, nor is he looked upon as a subject for condolence by those with whom he comes into daily contact. How could he be? He does not look a bit like the ghost of Banquo at the feast; when you meet him in the street the smile rises readily enough to his lips, and merriment even may sparkle in his eye. If you search for anything lugubrious about him, you will search in vain. He is a ready talker, a ready listener, and in business a perfect ready reckoner. If you ask his opinion about any question of moment, you have not to wait long for your reply. He will be down at the bottom of the page, down at the Q. E. D., in less time than it would have taken most men to arrange their premise. His friends say of such a man, "Poor so-and-so! he never was very robust in health, but how wonderfully lively he is!" while his enemies—if he has any—put him down as bird-witted, and prophesy his sudden extinction some day like the snuff of a candle.

Very kind of both friends and foes, I must say, but as a rule both are in some degree mistaken. For, in all likelihood, hardly has he shaken hands with you, with a hurried *au revoir*, until he heaves a sigh; and if you could see your friend sometimes, when he is all alone, you would not think there was much merriment about him: genuine, mind you, whatever his manner may have been when you met him in the street. In his moments of loneliness, were he to ask himself the question, "Am I happy?" the answer would be "No; I never know what it means to be happy." Perhaps, though—and this is a proof of the truth of Pope's lines:

"Hope springs eternal in the human breast; Man never is, but always to be, blest."

he promises himself happiness some day, even in this world, when he shall have done this, or accomplished that, or succeeded to that other, forgetting that true happiness lies only in contentment with one's present condition and legitimate lot in life.

But while his friends may be right enough in saying that our patient—for so I must call him—was never very robust, provided that he possesses blood free from any hereditary taint, and a heart not over-dilated, there is a good chance of his giving his foes the lie, and not going out like the snuff of a candle. People suffering from this fever of life, this nervous unrest, seldom look strong: they do not carry abundance of muscle, and therefore are unfit for any long-continued bodily strain; but, nevertheless, the strength of their muscle compared to its size seems often out of all proportion, and this enables them to do in one hour that which it would take a heavily-built man three to perform. Do not marvel at this, pray, nor doubt the truth of what I am telling you. Nervous force is a wonderful thing. I have seen a boy of seventeen in a fit of excitement and passion whom it required the united strength of four men to hold down. Nor do men who suffer from the complaint we are considering bend very easily before the storms of life, blow they ever so wildly; little things annoy them more, and sorrow itself, which seems at first ready to crush them, is, after a time, cast aside

by the very resiliency of their nervous systems. And so, too, they may for a time succumb, and that readily enough, to the little ailments of life, to trifling colds, or rheums, or aches, but these seldom lead to anything very serious; they pass speedily away, and the same causes which may produce deadly inflammations in the heavy-bodied and plethoric will, ten to one, be productive in the nervous of only some trifling inconvenience.

The reader will observe that I am talking about the sufferer from nervous unrest, as what people call a somewhat spare man. And so he is; a person of the true nervous temperament is never obese. But, it may be observed, do we not frequently see fat people who are exceedingly nervous? No, I reply; the term is misapplied: such people suffer from timidity, not from true nervousness; and such timidity has its seat at the heart, which is generally flaccid or fatty, and always easily agitated. Your true nervous man is a brave man. He may march into a battle, up to the cannon's mouth even, with a feeling of dread, something telling him he will never return; but he goes there all the same, and once face to face with something to fight, be it fire, or sword, or storm wave, fear is all, all forgotten in the excitement of conquering or being conquered. They are heroes *then*. Yes; undoubtedly the hour of reaction comes sooner or later, and they are low and miserable enough when it does; but, after all, to people of the nervous temperament must be granted the credit of being the salt of the earth, and I really do not see how this world could well wag along without them.

But, inasmuch as people who suffer from nervous unrest are possessors of a sorrow none the less acute because it is borne silently and uncomplainingly—inasmuch as nervous unrest is a wearing, heart-breaking burden in itself, that if not eased and lightened increases with years, bears down the frame, and even enshrouds with a gloom that cannot be penetrated the latter end of many a long and useful life—therefore I do not think I am wrong in considering it a disease, and trying to prescribe means for its alleviation.

Well then, in the first place, the sufferer from nervous unrest often longs for the quiet of retirement. If free, he thinks, from the world's bustle and care, he would be all right. He longs for the wings of the morning, in order to fly away and be at rest. This is a mistake. To be always basking in the sunshine of excitement, always in the midst of the battle of life, or always engaged in the exciting gamble of business, is killing, but a certain amount of excitement is necessary to the very existence of a person of the nervous temperament. Without it he would droop and die, like a tender plant placed in a semi-darkened room, into which the sun never shines, nor the fresh air finds access.

The great object of the nervous should be, as far as the body is concerned, to establish and keep up a correct balance between the blood and the nervous system. Sufferers from nervous unrest think and live faster than do others, and there is a greater waste of time, causing a drain on the system, which must be met by a due supply of healthy nutriment. It is when the demand is greater than this supply that hours of depression ensue, hours of unhappiness and misery by day, and sleeplessness or broken rest at night. Regulation and due selection of diet are therefore imperative, if a certain degree of happiness and comfort in living is to be obtained. The state of the stomach and digestive organs must be carefully studied; whatever is known to disagree must be avoided. The food should be taken as regularly as possible, day after day at the same hour, and not in too large quantities. A hearty meal to the nervous produces a certain degree of excitement, which is assuredly followed by slight dyspepsia, the only symptoms of which may be peevishness and irritability. The food should not be sloppy, and too much liquid should be avoided. No work should be done for half an hour after eating. Breakfast should be early, dinner in the middle of the day, and supper three hours at least before going to bed. But a lunch or milk biscuit may be eaten a short time before retiring. Perfect sleep will not be obtained if the stomach be entirely empty; indeed, going to bed with an empty stomach is generally followed by getting up next morning with that organ partially disturbed by gas, nauseating juices, and bile itself. The food should be nourishing, but at the same time substantial. The stomach is composed of muscular tissue, and deteriorates if not exercised: a truth which few are aware of, but which facts prove.

By judicious management of the digestive organs you supply the nerves with the elements organs tion. But you must do more: the blood of nutrition as pure as possible; it must be decarbonised by

plenty of fresh air; while the heart, the great centre propeller, must be invigorated and kept up to the mark by a due proportion of exercise. This must on no account be carried to the verge of fatigue.

Food, fresh air, and exercise act then on the nervous system through the blood, but the nerves are directly braced and toned by means of the cold or tepid sponge-bath, with occasionally a warm vapour or hot-air bath.

Change of scene and change of climate are nearly always beneficial to the sufferers from nervous unrest. Most cases are benefited by seaside or mountain air, but to some, life in the Midland counties, where trees wave and fields are green, is more soothing and calmative. But relaxing climates on the one hand, and exciting on the other, are as a rule to be avoided. When I speak of climates, I must be understood to mean those of our own country; but a sea-voyage does much good.

Is there no relief to be had from medicines? Sometimes there is, but it is not well-sustained. Flying for help to the Pharmacopoeia is not a habit to be recommended, and I would advise the nervous patient to take no medicine without first consulting a physician—cod-liver oil probably excepted; but this is more a food than a physic, and does much good as a calmative in cases where it is readily digested.

I have, last of all, to say a word or two about sleep—"tired Nature's sweet restorer." The italics are mine, not the poet's. I wish thereby to draw the reader's attention to the fact that unless a due proportion of muscular exercise be taken during the day, the sleep by night will not be refreshing. Exercise is the first preparation for sleep, and after supper, which, I have already said, should be early, the mind must not be allowed to dwell upon any thoughts that excite or annoy. It is a good plan to read for some time before going to bed, and one pipe of good tobacco may be allowed. Do not read in bed, but read in your bed-room: perhaps lying on the sofa, in comfortable *dishabille*, and ready whenever the inclination to sleep steals over you to get gently and softly between the sheets. The room should be quiet and dark, with the window-curtains drawn to exclude the too obtrusive morning light. The temperature of the room should, if possible, be sustained at about 55° or 60°. Bank the fire, else it will go out, and the temperature will fall, to your detriment. The bed itself should be moderately hard, but very smooth and even, the bedclothes light and warm, and the pillows soft and rather high. The room should be judiciously ventilated, and the curtains should not go right round the bed. I need scarcely add that narcotics or sleeping draughts are most injurious, whether in the shape of opiates or that slow but certain poison called chloral hydrate.

In conclusion, if he values his life and comfort, the sufferer from nervous unrest must do his best to avoid over-excitement of all kinds, both bodily and mental, and endeavour to maintain the *mens sana in corpore sano*, which, for once in a way, I must translate as a pure mind in a pure body.

Do You Know?

That a little water in butter will prevent it from burning when used for frying?
That a little saltpeter worked into butter that has become sour or rancid will render it sweet and palatable?
That pennyroyal distributed in places frequented by roaches will drive them away?
That wild mint will keep rats and mice out of your house?
That lime, sprinkled in fire-places during summer months, is healthful?
That leaves of parsley, eaten with a little vinegar, will prevent the disagreeable consequences of tainted breath by onions?
That flowers and shrubs should be excluded from a bed-chamber?
That oil paintings, hung over the mantelpiece, are liable to wrinkle with the heat?

For kindling take a quart of tar and three pounds of resin, melt them and bring to a cooling temperature, mix with as much coarse saw-dust, with a little charcoal added, as can be worked in; spread out while hot upon a board. When cold, break up into lumps the size of a walnut and you have, at small expense, kindling enough for a household for perhaps a year. It will easily ignite from a match and burn with a strong blaze long enough to start any wood that is fit to burn.—Maryland Farmer.

The Family Circle.

THE SOUTHERN BELLE:

OR, WHO LOST THE WAGER.

CHAPTER I.

My uncle Ned had set his heart upon marrying me to my cousin Rosalie; but the thing savored of compulsion to me, and I made up my mind to be just as obstinate as the nature of the case might demand.

I confess to being a little sentimental. I have read heaps of novels in my day, from the Children of the Abbey down to Bleak House, and the thought of having my uncle pick out my wife for me was tolerably repugnant to my ideas of propriety and the rights of man.

Uncle Ned was a jolly old fellow, and laughed in my face when I told him I could not think of such a thing as permitting him to select my wife for me. I looked dignified and I felt dignified, and I was not a little mortified when the old fellow haw-hawed right in my face.

"But, my boy, she is as rich as mud—with an income of eight thousand dollars a year," said he. "Think of that."

"My dear uncle, I beg you will deem me above mercenary motives in so important a matter as this," I replied, with a seriousness in keeping with the solemnity of the topic discussed.

"Perhaps you don't mean to take a wife—die an old bachelor—eh?" continued he, punching me under the short ribs as he poured out another of his abominable "guffaws."

"Not so; on the contrary, I mean to take a wife just as soon as I can find one exactly suited to my mind."

"And you don't mean to marry a girl that has got any money?"

"That is perfectly immaterial, sir, as you are aware that my fortune is amply sufficient without the addition of a wife's dowry."

"But the money wouldn't do any harm, would it?"

"No, I should not object to a lady who possessed the requisite qualifications, because she happened to have a fortune at her disposal, though in my estimation it would add nothing to her fitness to become my wife."

"Indeed," drawled Uncle Ned, looking at me with such a funny expression that I could not tell whether he was going to laugh or get mad. I didn't care much; for I deemed it beneath his dignity to attempt an interference in such a delicate matter.

"But, Bob, Rosalie is the most beautiful girl in South Carolina. There are thousands of young gentlemen of the first families at the South who would jump at the chance to step into your shoes."

"They can do so, sir. I tell you plainly she can never be my wife, if she were a pearl and had all South Carolina for her dowry," said I, with dignified earnestness.

"Whew!"

"Your sneers will be as useless as your persuasions; they shall not move me."

"But, Bob, you know her father earnestly desired that you should be married, before he died," added the uncle, more seriously.

"It matters not, sir; I must be entirely unembarrassed in the choice of a wife. Let me tell you plainly, that, if I had no other objection, the mere fact that you have attempted to draw me into this marriage were a sufficient reason for me to decline it."

"Eh! you young puppy, what do you mean by that?"

"Just exactly what I say, viz: that I will neither be led or driven into marriage with Rosalie. I think we have said enough about it."

I had begun to talk a little coolly. He was, in my opinion, treading upon the prerogative of a freeborn citizen.

What did the old fog mean? Did he think I hadn't sense enough to choose my own wife? Rosalie was entirely out of the question—I could not, on principle, be driven into a matrimonial connection, even though the other party was an angel and had a dowry of eight thousand a year.

"Mr. Bob, listen to reason. Rosalie is handsome, and graceful, and all that sort of thing; sings like a nightingale, plays the piano and harp, and can talk French like a Parisienne."

"It matters not, sir; I object to the principle of the thing, and I repeat, I cannot and will not marry her."

"Bob, you are a fool!"

"Am I?"

"Pon my word you are: you don't know on which side your bread is buttered."

"Enough, sir!"

"But, Bob, you will pay us that visit won't you?"

"Certainly; but do not flatter yourself I shall make love to Rosalie. I shall go prepared to shun her; yes, to be even uncivil to her. If I am, blame yourself for your impudent interference in my concerns."

"Saucy puppy!" and my uncle laughed.

"You are a meddler; you make me saucy. I trust I shall always be prompt in resenting any invasion of my natural rights."

"Hope you will, my boy; but I will bet you a thousand dollars you marry Rosalie."

"Done!"

"But on one condition."

"What?"

"That you come to my estate in South Carolina with a susceptible heart—that you are not engaged to another."

"I accept the condition," said I, grasping his hand; "uncle, you have lost the bet."

"Not yet, Bob; wait a bit."

It was rather foolish in the old fellow to make such a silly bet; but I was so sure I could resist the attractions of my cousin, even though she should prove to be a Venus, that I considered the money already mine, and what was far better, that I had won the victory over him.

That night Uncle Ned started for his plantation in South Carolina.

CHAPTER II.

My father died three years before this conversation, leaving me an ample fortune. His two brothers had been in South Carolina for thirty years, where the father of Rosalie died, leaving my Uncle Ned her guardian.

I had often been told that Rosalie was a very pretty girl; but she had been to the North only once, and then I was traveling in Europe, so I had never seen her.

I had written Uncle Ned, promising to spend a month with him in the autumn. Business had called him to Boston, where our interview occurred. He had more than once expressed a desire that his brother's property should remain in the family, and pressed me to unite my fate to that of his beautiful niece.

This was out of the question. "A made up match" was my abomination. Certainly I had no other reason for my violent prejudice against the marriage. I considered it a sacred obligation to fall in love before I took a wife, and the idea of being pledged to Rosalie before I had seen her myself was so absurd that I had no patience to think of it.

And then I had a principle for my guidance in affairs of the heart, which absolutely forbade me to think of such a thing as a "marriage for convenience."

The autumn came and I paid my proposed visit to Uncle Ned's plantation in South Carolina.

I was disappointed in my cousin Rosalie. She was a tolerable good looking damsel, but in my opinion very far from being like the beautiful creature she had been pictured to me.

"Isn't she handsome, Bob?" said my uncle. "Did you ever see such lips, such a head of hair, such eyes, such a graceful form?—Isn't she handsome, eh, you dog?" And the old fellow punched me in the ribs, and roared with laughter till he nearly split his sides.

I couldn't for the life of me see what he was laughing at. "Isn't she beautiful, you rogue?" he continued.

"Passable," I replied very coldly.

"Passable! You puppy! What, do you mean to say Rosalie is not handsome?"

"Tolerably," I answered, twisting off the leaf of a palmetto, which grew by the side of the bench on which we were seated just to show him how indifferent I was.

"Bob," said he, looking more soberly, "I had an idea you were a man of taste; but I see you are as likely to fall in love with one of my black wenches as with the prettiest girl in South Carolina."

"Who's that, Uncle Ned?"

This remark was called forth by the sudden appearance on the gravel walk of the loveliest creature I ever beheld, and that considering I have flirted with the belles of Paris, Naples and Rome, is saying a great deal. I was confounded by the sudden apparition and springing from my seat as if an electric shock had roused me.

Shades of Venus! did any one ever see such a divine expression!

I could neither speak nor move, so completely was I paralyzed by the glorious beauty of the nymph.

"I didn't know there was any one here," stammered she, with such a delectable blush on her cheek, that I nearly went mad with enthusiasm.

Before I could recall my scattered senses the beauty bounded away as lightly as a fawn.

"What the devil ails you, Bob? What are you staring at?" said Uncle Ned.

"Who is she?" asked I, clasping my hands in the rapturous excitement of the moment.

"That? why that's little Sylphie Howard—one of Rosalie's friends, who is spending a few weeks with her," he replied, indifferently.

"Beautiful!" said I.

"She! Passable!"

"She is divine!"

"Tolerably good looking, but she is nothing to be compared to my Rosalie."

I was about to say something saucy; but I thought since Uncle Ned really believed what he said, I would not hurt his feelings by denying it.

At dinner I met both ladies, and was formally introduced to "little Sylphie Howard."

I was provoked with my uncle when he assigned me a seat next to Rosalie. I could hardly be civil to her, with such a pair of beautiful eyes before me, and I hardly ceased to gaze upon Sylphie during the hour we spent at the table.

After dinner we went out to ride on horseback. Uncle Ned annoyed me again by contriving it so that I could help Rosalie mount her horse, and ride by her side, and he, the provoking old fool—did the offices of gallantry for Sylphie.

"No use, old chap, you shall lose your bet," thought I, and I tried to be civil to my cousin.

I don't think I succeeded very well. I am very sure I did not fall in love with her. My eyes rested all the time upon the fair and graceful horse-woman who rode before me.

And thus it was for a week. Uncle Ned managed to keep me by the side of Rosalie nearly all the time. If we played whist she was my partner; if we rode in the carriage she sat by my side; if we walked, he monopolized Sylphie and left Rosalie to me—and more than once the old fellow left us alone together as though he thought I was all ready to pop the question and hand him over to the thousand.

But I was discreet. I gave her a wide berth, and sighed for the love of the beautiful Sylphie Howard. I was head over heels in love—would have eloped with her in a moment, if she would have consented.

In spite of my uncle's vigilance, however, I found opportunities to flirt a little with Sylphie, and one day I lured her into a grove of palmettos in the rear of the mansion house.

Time was precious. I was the hero of a novel. Cruel uncles in bob-tail wigs sought to crush out the affections of my heart. In short I threw myself at her feet, and with all the eloquence that Harvard College had been able to crowd into my composition, I declared my love. I used classic terms, I quoted Milton, Byron and Shakespeare, and called on all the gods in the calendar of Greece and Rome.

Did she accept me? Of course she did; she couldn't help accepting me—I am not an ill looking fellow, let me say, in extension of her weakness, and I had popped the question in a decidedly original manner.

I printed twenty-four kisses on each of her pretty cheeks, and she blushed till I thought her eye-lashes would take a fire and cheat me of my prize.

We kept our counsel for two or three weeks, and one morning, when we were riding out, we got away from Uncle Ned and Rosalie and clipped it away about ten miles to a clergyman, who was so obliging as to supply us with a marriage certificate.

We rode back more leisurely. I was in my element. An elopement was just the kind of excitement to suit me.

We got back to Uncle Ned's about dinner time.

"Where have you been," asked Uncle Ned.

"Over to Rev. — s. Allow me to present my wife," said I, with a perfect nonchalance.

"The deuce."

"Just so; and Uncle Ned, you have lost the wager. One thousand, if you please," said I, holding out my hand.

"No you don't, you puppy."
 "Fairly won."
 "Is it, Rosalie?" said he, turning to my wife.
 "Eh, what do you mean, Sylphie?"
 "Ha, ha, ha," roared Uncle Ned.
 "I didn't know what to make of the affair at all."
 "You have lost Bob," cried the jolly old fellow, as soon as he could speak.
 "No."
 "Fact, Bob," said he, pointing to her I had hitherto known as my cousin, "this is Sylphie Howard."
 "You have cheated me, then."
 "I have cheated you into the handsomest wife, and the biggest fortune in South Carolina. The fact is, Bob, you were prejudiced against Rosalie. You came here resolved to be un-civil to her. I determined to give her a fair chance, though I had to tease the jade into compliance. You are caught."
 "Not quite, Uncle Ned; this is not a legal marriage. Rosalie was united to me under a fictitious name."
 "I don't care a straw for that. You married the lady you held by the hand. But, Bob, we will have to do it over again. Do you say so, you dog?"
 Of course I did say so. I would not have lost my divinity for all the treasure in South Carolina. I paid over the money, and Uncle Ned gave it to the free schools of the State.
 A few weeks after we were re-married, and I returned to the North with my Rosalie, the most beautiful and the most loving wife that ever lighted the destiny of a wayward fellow like myself.

Minnie May's Department.

MY DEAR NIECES,—Since I last wrote I have been far away from most of you, and this month I intend to take you also on a rambling journey, and present you with merely a few notes and incidents, in a very condensed form, of the trip. The Press Association of Ontario each year take a trip to various points; this year special attractions were offered for a trip to Manitoba and the great Northwest. The party consisted of about 60 editors with their wives or daughters, from Ontario, supplemented by a small number of editors from Quebec and the Maritime-Provinces, numbering over a hundred in all. We started Aug. 22nd, reaching Windsor about nine in the evening, where the train runs on a large ferry boat, which crosses the river to the city of Detroit. From this point Detroit looked exceedingly pretty, the reflection of the numerous and many colored lights dancing in the water, several illuminated boats plying up and down or across the river, and, as we neared the other side, the sound of sweet music from distant bands fell upon the ear. This was a welcome break in our long journey—the night was hot, the cars were stifling; but after enjoying the fresh air for about half an hour, we returned to our cars, and finding our berths made up, we determined to try and seek sleep and rest, and so prepare ourselves for the following day in Chicago. We reached this great city about 8 a. m., and remained until noon the next day, thereby giving us a little time to see a few of the sights and wonders of the place. We visited the parks, public buildings, large stores, ranging from ten to fourteen stories high, galleries, theatres, stock yards—in fact, everything that could possibly be seen in the short space of time, was taken in by the "knights of the quill." The cable cars were quite a novelty to most of us. On State street there is a double line of track on which from 3 to 6 attached cars are constantly running in either direction by an unseen power; the secret is an underground cable operated by powerful stationery engines; the first, or grip car, possesses the power, by means of a lever, to stop quite easily; notwithstanding, a great number of persons have been run over and killed since last January, when they were first introduced in Chicago. But, as the most interesting part of our trip lies further west, I must not dwell longer here. The next day, at the appointed hour, the entire party met at the station of the Chicago, Rock Island & Pacific Railway, and started off for St. Paul, 520 miles distant. One and all seemed in high spirits, and by this time we were becoming pretty well acquainted, so that by nightfall we would all join in singing, playing cards, and having a right good time socially. We found all on board very agreeable and kind recollections of the party will always be remembered—at least by me. Minneapolis was reached in the early morning; here we

made a stay of two hours, so after breakfast we went about sight seeing. It is but ten miles from St. Paul, and similarly situated, being built on both sides of the Mississippi. We left Minneapolis by the St. Paul, Minneapolis and Manitoba railway, running through the centre of the State of Minnesota. This State is filled with beautiful little lakes; some say it contains 10,000, at any rate it is simply a delightful ride among them, one or more on either side almost constantly in view, and each lined and skirted with green wood. Then we pass through the vast plains and prairies we have heard so much about, but you cannot imagine without seeing the beauty, and yet the monotony of such a scene, to look as far as eye can reach on every side and see nothing but broad, flat land with the appearance of the blue sky and earth meeting, and you almost imagine there is a sea or large body of water beyond. Especially charming is the glorious sunset; with what eagerness the whole company sat and admired the last rays of the setting sun as it faded away in the western sky! When we awoke in the morning we were rapidly nearing Winnipeg, and by seven o'clock were landed at the station of this wonderful young city. From the crowd that had assembled to meet us at this early hour we supposed the greater part of Winnipeg had turned out to welcome us; but no, it was only the friends of the separate members of our party, whose names and notices of arrival had been printed the evening previous in the daily papers, come to meet us. At the same time Messrs. Luxton & Rowe, representatives of the Winnipeg press, claimed us for the day as their guests, and immediately after breakfast took us for a sail on the steamer Marquette down the Red river; this was a delightful change, and as we passed rapidly down the muddy and crooked stream, the bank on either side lined with trees and green shrubs, and meeting a good breeze which added to our comfort, with such enjoyment surrounding us, how could we be otherwise than happy and in good humor? We landed at Lower Fort Garry; from this point we obtained a good idea of what the Hudson Bay fortifications formerly were. Dinner was served here, and the effect of the bracing air had given us splendid appetites to relish the good things thoroughly, after which we strolled lazily about; some gathered shells or flowers, as mementos. Again on board, we soon reached Selkirk, where the citizens had prepared an elaborate reception, all the ladies of the place graciously tendering their services towards adding to our comfort, even waiting on the table. After a look through the little town, we were escorted to the banquetting hall, where addresses were made and thanks returned by our indefatigable president, Mr. Pense. Again on board, we are greeted by a large, old squaw dancing for our amusement; a collection was taken up for her, many throwing in bills with a goodly amount of silver, so she was well paid for her jig. We then crossed the river and took a special train, and in our own Pullman cars were soon being rapidly whirled into Winnipeg. The stay in Winnipeg for the party was very limited, if they carried out the programme prepared for them; but here I remained, while the rest went out 409 miles farther west to the end, at that time, of the C. P. R. track, which was being laid at the rate of four miles a day, visiting Brandon, Portage-la-Prairie, Broadview, Pile of Bones (now Regina), enjoying a continuation of receptions, banquets, and elaborate feasting; in the meantime I was sight-seeing in Winnipeg, and now I find, for want of space, I shall have to leave over a description of this remarkable city, the growth of which rivals anything we read of in ancient or modern story, and talk with you about Winnipeg in a future number. Early Thursday morning I once more joined the party of excursionists and proceeded with them to Rat Portage, the Thousand Islands, and summer resort of Manitoba. When we looked out and beyond in the bright morning sunlight and breathed an atmosphere "unstained by envy, discontent, and pride," whilst dashing across some running stream or cautiously moving over some new trestle bridge or through a steep, hollow cut in the rock, where the sunlight breaks with difficulty, or gliding along the shady plains, covered with wild flowers and berries, produced a rare exuberance of spirits, while our eyes feasted upon the opening gorges and ever-varying kaleidoscope of beauty around and about us. Rat Portage was reached by breakfast time. It is situated on the beautiful Lake of the Woods, just a charming spot to go camping for a few weeks "away, away from men and town to the silent wilderness." Here we were treated by the town cooperation to a sumptuous

breakfast, and afterwards a sail on the placid waters of the Lake of the Woods. This lake is extremely beautiful, dotted with numberless small and pretty islands; the shores abound in green trees, shrubs and moss-covered rocks; here, too, the skillful angler finds ample reward for his labour. During the too brief trip the young people gave expression of their love of the beautiful by singing in chorus all the old and popular songs: it was altogether very enjoyable. In the afternoon we took the cars again and went some twenty or thirty miles farther east to Hawk Lake. The road in places was rough and treacherous. We were told that ours were the first Pullman cars that had ever traversed it, and, as they swayed to and fro, and the singular-looking trestle bridges creaked beneath their heavy weight, not a few became quite nervous, and all were glad when we were safely over on the return trip. At this place lunch was provided for the hungry visitors in a large tent upon the hill-side. Of course speeches followed, but the majority, in some mysterious manner, escaped and were wandering in the hollows or upon the mountainous rocks and hills in search of curiosities. They succeeded in finding lots of blue-berries and wild everlasting flowers. It was dusk before we started on our return trip; the night was warm and beautiful; the moon never shone brighter upon lake, rock and river, and once, when we stopped to look at the water falling several feet upon the steep rocks below and the spray rising in a cloud of mist, we were enchanted. What with viewing the scenery and with such good company, it was with reluctance at last we each sought our respective berths, while all nature was long ago sleeping. We passed through Winnipeg quietly during the night, and by 7 a. m. we had halted at Emerson. About a hundred carriages were in waiting here to convey the party to the handsome residence of W. N. Fairbanks, Esq., where we were treated in the most hospitable manner, every comfort and accommodation possible for the guests, a champagne breakfast and every conceivable delicacy being provided. Again in the carriages, we drove to the town hall, where the day before there had been held a flower show, and very pretty and tasty was the display; kind addresses followed. Afterwards we drove through West Lynne, Pembina, and St. Vincent. At the latter place we took the cars, bound home-ward; amidst cheering, singing "Auld Lang Syne," and "Home, Sweet Home," we bid adieu to Manitoba, having spent and enjoyed a time the remembrance of which must ever be recalled with pleasure.
 MINNIE MAY.

Answers to Enquirers.

PANSIE, N. B.—Please give me a few ideas on the preparation of a wedding breakfast for 20 persons. **ANS.**—The wedding cake is the most prominent part of the feast, and would occupy the centre of the table. At the head of the table a boned turkey roasted, flanked with a boiled ham; at the other end a pair of roast fowls and another ham or two smoked tongues, boiled; a lobster currie, lobster salad, a chicken salad; a dish or two of oyster patties; two good sized raised veal and ham pies; a round of beef stuffed; assorted pickles and sauces. As the breakfast is most conveniently served cold, the only vegetables supplied may be limited to mashed potatoes put upon various forms and browned. The *entremets* may consist of calf feet jelly in glasses; jelly cheese cakes; custards, blanc-mange; *meringue* apples; iced *meringues*; tarts; mince pies; sweet omelettes, raisins, almonds; English walnuts. Now, if this bill of fare contains some things which require further information, please ask for it.
 J. O. H. W.—1. Is it wrong to play sacred music with the violin on the Sabbath day? 2. Is it proper for a lady to correspond with two gentlemen at the same time and not to tell either she is doing so? **ANS.**—1. No; it is quite proper to play sacred pieces on any instrument on Sunday. One instrument of music cannot be more sacred than another. 2. It depends on the nature of the correspondence. If merely friendly, there can be no impropriety. A lover-like correspondence would, of course, be different.
 S. P. G.—Canadian bishops should be addressed as "my lord" and "your lordship." Some wish to do away with these titles as unmeaning and contrary to the spirit of the country, but so long as titles are used at all, there can be no reason for abolishing those pertaining to the church. When writing to bishop or bishops, use a small b, but when using as a title, thus, "Bishop Bond," use a capital letter. There would be no difference between Catholic and Protestant bishops; both are entitled to be addressed as "my lord."

YOUNG HOUSEKEEPER.—Please give a recipe for pumpkin pies. **ANS.**—Stew the pulp of the pumpkin in water, only enough to keep it from burning, salt to flavor, until it is soft, drain it, and let it stand near the fire ten minutes to dry. Cool, and strain it through a sieve. To a quart, add a quart of new milk, beat up four eggs with sugar, and stir it into the pulp, add ginger, nutmeg, the grated rind of a lemon, lay the custard in a thin paste on a pie plate, fill in the custard. Bake in a moderate oven.

H. M.—What is the best way to pack butter for winter use? **ANS.**—To have butter keep well it must be good when made, and for this the milk and cream must be in good order. Keep the milk in a sweet, clean, cool place; have all the pails and pans free from acidity or grease or soapiness. After the butter is churned, wash it free from milk in cold water, and salt it with one ounce to the pound. Then, after working it in a proper manner, pack it in new white oak or spruce tubs or pails. First scald the pail well, then rinse with cold water, then rub with salt and rinse again slightly, and then pack the butter to the top. Cover with a piece of clean muslin dipped in water, and sprinkle fine salt over it. Then put on the cover and close it down tight.

BEDELLA.—I would like to know how to make catsup. **ANS.**—The best catsup is made of mushrooms, as follows: To one peck of the large fully grown flaps, cleared of sand and insects and broken up fine, add $\frac{1}{2}$ lb. of fine salt, using an earthenware pan; let them stand three days, mashing and stirring the pulp daily; then strain and squeeze out all the juice. To each quart, put $\frac{1}{2}$ oz. each of bruised ginger and black pepper; $\frac{1}{4}$ of each of all-spice powdered, cayenne pepper and mace; boil for 3 hours gently; let the spices remain in the catsup. Green walnuts gathered when full grown, but quite soft and chopped up, make an excellent substitute for mushrooms. Tomato catsup is made of tomatoes scalded and peeled, left one day covered with salt, then mashed and strained from the seeds. To 2 quarts of the liquor add 3 oz. of cloves and 2 of black pepper powdered; 2 grated nutmegs, a little cayenne pepper and sufficient salt; boil $\frac{1}{2}$ an hour; when cool add $\frac{1}{2}$ pint of good cider vinegar and bottle closely.

Recipes.

COCONUT DROPS.—Grate a cocoanut; add half its weight of fine sugar, mix well together with the white of one egg, and drop on white paper. Bake in a slow oven. **MRS. DR. T.**

ANNA'S CUP CAKE.—One-half cup of butter; one-half a cup of sweet milk; two eggs; one cup of sugar; two tea-spoons of baking powder; two cups of flour. This is always a success and is equally good whether baked as a layer cake or in small fancy tins.

PRINCE ALBERT'S PUDDING.—Beat to a cream one-half pound fresh butter and mix with an equal weight of fine white sugar. Add to these first the yolks and then the whites of five eggs, which have been thoroughly beaten apart; throw in lightly one-half pound fine flour, and one-half pound stoned raisins. Put these ingredients, well mixed, into a buttered mould, or floured cloth, and boil for three hours. Serve with sweet sauce.

FRENCH PUDDING.—Slice small pieces, very thin, from your bread, enough to fill a quart dish half full, buttering each piece lightly before cutting. Lay them loosely in the dish; sprinkle on one-half cup of sugar and a little grated nutmeg; then heat on a quart milk; beat the yolks of four eggs, add them just before boiling, and immediately pour over the bread. Beat the whites, add a little sugar and spread them over the pudding; set in the oven five minutes to brown lightly, and it is ready for the table. This dessert can be made in twenty minutes ready for use.

PANCAKES.—Beat up three eggs and a quart of milk; make it up into a batter with flour, a little salt, a spoonful of ground ginger, and a little grated lemon-peel; let it be of a fine thickness and perfectly smooth. Clean your frying pan thoroughly, and put into it a good lump of dripping or butter; when it is hot pour in a cupful of batter, and let it run all over of an equal thickness; shake the pan frequently that the batter may not stick, and when you think it is done on one side, toss it over; if you cannot, turn it with a slice, and when both are of a nice light brown, lay it on a dish before the fire; strew sugar over it, and so do the rest. They should be eaten directly, or they will become heavy.

October.

Oh! suns and skies and clouds of June,
And flowers of June together,
Ye cannot rival for one hour
October's bright blue weather;

When loud the bumble-bee makes haste—
Belated, thriftless vagrant—
And golden rod is dying fast,
And lanes with grapes are fragrant;

When gentians roll their fringes tight
To save them from the morning,
And chestnuts fall from satin burrs
Without a sound of warning;

When on the ground red apples lie
In piles like jewels shining,
And redder still on old stone walls
Are leaves of woodbine twining;

When all the lovely wayside things
Their white-winged things are sowing,
And in the fields, still green and fair,
Late aftermaths are growing;

When springs run low, and on the brooks
In idle, golden freighting,
Bright leaves sink noiseless in the hush
Of woods, for winter waiting;

When comrades seek sweet country haunts,
By twos and twos together,
And count, like misers, hour by hour
October's bright blue weather;—

Oh! suns and skies and flowers of June,
Count all your boasts together!
Love loveth best, of all the year,
October's bright blue weather.

Damp Houses and How to Remedy Them.

Damp houses are a fruitful source of discomfort and disease, and yet, as important as their influence is, it is amazing how seldom means are taken by which the evil may be prevented. When a house is said to be "well drained," however true this may be of the plans adopted for carrying away the refuse water of domestic operations, it very rarely means that the site has been drained to prevent damp.

When experienced medical men see house after house built on foundations of deep, retentive clay, inefficiently drained, they foretell the certain appearance among the inhabitants of catarrh, rheumatism, scrofula, and a host of other diseases of a similar nature. Where a damp house exists in connection with deficient sewerage, drainage or a cesspool full of decomposing material—an unfortunate conjunction too often met with in country and suburban houses—other and more dangerous diseases, as typhus fever, are induced. The watery mist of fog rising from a damp soil affords an admirable vehicle for the subtle and deadly exhalation of the decomposing drainage matter, by which they are too certainly conveyed to the interior of the house. And, physiologically dependent upon this condition of affairs, a mental as well as a physical depression is induced, which drives those subjected to the temporary relief afforded by the use of ardent spirits and other stimulants. Thus, in this, as well as in other departments of sanitation, the connection between physical and moral disease is easily traced. There can be no doubt as to the increased pecuniary and sanitary value of land suitable for building sites, arising from efficient drainage being carried out. The greater the inducements offered by the healthy condition of a neighborhood, the greater the value of the land for building sites. An excess of moisture in any district inevitably influences the local climate both as regards dryness and temperature.

The most effectual preventive of damp houses is the complete drainage of the site on which they stand. All other remedies are but remedies in name, more especially when the soil is very damp; in such a case lead or slate placed round the bottom courses of the foundation with waterproof cement may prove efficient for the time, but will ultimately become inoperative. The system of drainage for carrying off surplus water from the land is different from that adopted for conveying away domestic refuse water, etc. In the latter it is essential, nay, imperative, that the drains should be water-tight, capable of conveying the water admitted to their interior immediately to its ultimate destination, but incapable of passing any of

it to the surrounding soil through which the drains are laid. The former, on the contrary, should be permeable throughout their length; that is, have apertures of sufficient width throughout which the water of the surrounding soil can find its way into the interior of the drain, which should be of such a shape as to facilitate the removal of the water to its destination, preventing its return to the soil.

In laying and forming the drains the following points should be attended to: The first to be observed is the uniformity of slope or level of the bottom of the trenches. The method of accomplishing the perfectly uniform slope of the drains, from their highest point to their outfall, is by the use of level-rods or the spirit-level. Not so with the level-rods, as following description of their uses will show: Three rods are required, two of them two feet long and the third as much more than two feet long as the drain is deep—that is, if the drain is three feet six inches deep, the rod must be five feet six inches long. The rods are strips of wood with cross pieces nine inches long on the upper end. The two shorter rods are planted upright, one on the ground on a level with the field at the head of the drain, and the other at the lower end, and a person stands at one of them looking over its top, with his eye on a line with the other. A second man then takes the longest rod and holds it upright in the drain, just touching the bottom, and walks along from one end of the drain to the other, keeping it in an upright position. If, while it is moving along, its top always appears on a line with the tops of the other two—as seen by the person looking along the three—the fall of the drain is uniform; but if it rises above this line at any one place, the bottom is too high there, and requires to be reduced; if it falls below the line the bottom is too low, and must be raised. In this way the fall may be rendered perfectly uniform. In cutting drains the best way is to commence with the main drain, and at its lowest point, working gradually up to the highest. An intelligent mason or carpenter may be intrusted to make drains of this sort at very little cost, and we are sure no houseowner who cares for the health of his family will ever regret the investment.—*Builder and Woodworker.*

How to Keep Lard.

When the scraps are just beginning to get brittle and brown, put in a tablespoonful of fine salt to a quart of the hot lard, and there will be no trouble; the lard will keep perfectly sweet for any length of time, and the salt does no possible harm to any kind of cookery. A person can easily judge of the quantity of lard if they know how much the kettle holds. It makes the lard whiter and harder, aside from preserving it sweet. It must cook a little while after adding the salt. That designed for summer use should be either kept in a tight earthen jar or a tin bucket with a cover. To restore lard that is a trifle tainted, put the lard into an iron kettle, and cut up salt pork in thin slices—about one-half pound of pork to a gallon of melted lard; add two spoonfuls of salt, and let it cook till the pork is crisp; take out the slices of pork and turn the lard into your jar, and you will never know that it has not always been sweet. But it is better to salt it in the first place, as it saves much trouble and time.

When the lard gets scorched by frying doughnuts, as it sometimes will (especially if the girls are doing it), it can be made nice again by slicing a raw potato into thin slices and dropping into the kettle and frying till quite brown. They absorb all the bitter taste, and collect the dark specks on their surface, and make the lard fit for use again. Another way to cleanse lard in the frying-pan is just before you set your kettle away, to pour in some boiling hot water and let it stand and cool. When you wish to use it again, take a knife and run around the edge of the lard; lift it from the kettle, and lay it bottom side up on a flat plate; scrape off all the brown coating for the soap grease; turn out the water and cleanse the kettle, if any water stands in drops on the lard, let it drain off, and your lard is pure and sweet. By attending to these little items of economy, a great saving is effected in the course of a year, and farmers' profits are mostly made up of little items. It is a common remark, if a farmer fails in business, that "his wife is extravagant"—as if all the blame rested on her for his misfortunes. I think it is a mistake to lay everything on the shoulders of the wives, for there are some men who have proved themselves "penny wise and pound foolish."—*Farmer's Wife, in Country Gentleman.*

The Care of Canaries.

A pair of canaries I give you to care—
Don't blind them with sunshine, or starve them
with air,
Or leave them out late in the cold or the damp,
And then be surprised if they suffer from cramp;
Or open the window in all kinds of weathers
Quite near to their cage till they puff out their
feathers.

The birds that are free fly to bush and to grot
If the wind be too cold, or the sun is too hot;
But these pretty captives depend on your aid,
In winter for warmth, and in summer for shade.
When they chirrup, and ceaselessly hop to and fro,
Some want or discomfort they're trying to show;
When they scrape their bills sharply on perch or
at wire,
They're asking for something they greatly desire;
When they set every feather on end in a twinkling,
With musical rustle like water a-sprinkling,
In rain or in sunshine, with sharp call-like notes,
They're begging for water to freshen their coats.
Cage, perches and vessels, keep all very clean,
For fear of small insects—you know what I
mean!

They breed in their feathers, and leave them no
rest.

In buying them seed, choose the cleanest and best.
I feed my canaries (excuse me the hint)
On hemp and canary, rape, millet and lint.
I try them with all, till I find out their taste—
The food they don't care for they scatter and waste.
About their bright cages I hang a gay flower,
Of shepherd's-purse, chickweed and groundsel in
flower.

At a root of ripe grass they will pick with much
zest,
For seeds and small pebbles their food to digest.
But all should be ripe, and well seeded, and
brown,

Few leaves on the groundsel, but plenty of down.
In summer I hang them out in the shade,
About our hall door by a portico made;
In spring, autumn, winter, a window they share,
Where the blind is drawn down to the afternoon
glare.

This window, if open, beneath them we close,
Lest the cramp should seize hold of their poor little
toes.

A bath about noontide on every warm day
Will keep your small favorites healthy and gay.
In hot summer sunshine some calico green,
As a roof to their cage, makes a very good screen.
On winter nights cover from lamplight and cold,
And they'll sing in all weathers, and live to be old.
—The Animal World.

Are Women Better Dressed than Men?

One of the signs of advanced civilization is dis-
comfort in dress; the further any nation advances
in civilization, the more she tortures her subjects,
and, strangely enough, this infliction falls upon the
so-called upper class. The educated class, the
members of the liberal profession, the denizens of
the city, the merchant and his clerks, suffer more
than the poor laborer from heat, if not from cold.
As between the sexes there is little difference in
this respect. Civilization even extends its cruel
hand over the babe in its cradle, and would afflict
the dead if they had any feelings left.

Science has investigated the absorbent and radi-
ant power of different fibres and different colors,
but, man in his wisdom, disregards this, and pre-
fers the worst instead of the best. Woman may
expose her brain to the direct rays of the sun by
wearing a small, useless bonnet, but fashion com-
pels her to carry a parasol to compensate for it.
On the other hand, fashion, not so cruel as she is
painted, is equally in favor of large hats with use-
ful brims. Not so with a man. Broad brims are
tabooed, and parasols are not permissible. With
regard to the neck, man has no choice; a collar he
must wear, and one fitting close to the neck and
reinforced by a cravat or tie. To woman alone is
granted the comfort of low-necked, half-low, heart-
shaped or loose-fitting collars. The body, or
trunk, is no better off. Man must wear a stiff
white shirt, a vest, and a lined and padded coat.
Women need wear but one (visible) garment, which
may be made as light and thin as is possible with-
out being transparent. It is even doubtful whether
the tightly drawn corset, that object of universal
use which is so violently denounced by the opposite
sex, causes more discomfort than the numerous
articles with which man surrounds himself; for
physiologists have learned that woman can breathe
with the upper part of the lungs (thoracic breath-

ing), and therefore suffers less from tight-lacing
than man. As regards the arm, matters are pretty
evenly balanced, with the odds in favor of woman,
who may shorten her sleeves as much as she pleases,
and in no case wears more than one long-sleeved
garment, where a man wears three. Cuffs she may
dispense with, but he cannot. Her sleeves need
not be lined; his must, unless of very thick ma-
terial.—[Boston Journal of Chemistry.

The "Esthete."

S. S. LUCE.

Sweet Oscar Wilde comes o'er the sea
With breeches fastened at the knee;
His flowing locks of ancient gold
Curl on his shoulders manifold;
A collar broad turns on the vest
That covers his "esthetic breast,"
While ribboned slippers grace his feet;
They call him "Oscar, the Esthete."

Why comes this artist devotee
From "Merry England" o'er the sea
In this most fanciful attire?
Perhaps he doth to fame aspire—
To tell the Yankees what is art,
And teach them what he knows—in part;
For he is sweetest of the sweet—
This Oscar, surnamed "the Esthete."

Then listen to this Oscar's words,
Sweet as the songs of blithesome birds;
Wise as the oracles of old,
And striking in the manner told.
Seek Oscar for artistic gain,
And rising to a higher plane,
Obtain that wisdom most complete,
From this immaculate "Esthete."

Yet though his teachings seem quite wise,
All cannot see with Oscar's eyes;
Some find a charm in Gothic nave,
And some in Grecian architrave,
Bold Doric strength, Corinthian grace,
Each fills its well appointed place;
Yet what can human hand perfect,
Compared with Nature's Architect!

Who seeks the "beautiful and true"
In ancient forms and in the new—
The purity of mind and heart—
A something that is more than art—
Who leaves all grossness by the way
And n'er from virtue turns astray—
His life shall be both pure and sweet,
Though he may not be called "Esthete."
—[Galesville Independent.

The Lobster.

When a lobster shakes hands with you, you
always know when he takes hold, and are ex-
ceedingly pleased when it gets done. They have
small features and lay no claim to good looks.
When they locomote they resemble a small boy
shuffling off in his father's boots. They are back-
ward, very. They even go ahead backward. They
occasionally have a row like people, and in the
melee lose a member, but have the faculty of grow-
ing another. The process is patented both in this
country and Europe, which accounts for it not
coming into general use with the human lobster, so
to speak.

A lobster never comes on shore unless he is car-
ried by force. They are afflicted with but one
disease, and that is boils. There is more real ex-
citement in harpooning a whale or in having the
measles than there is in catching lobsters. The
fisherman provides a small hen coop, and places in it,
for enticers, several dead fish. He then rows his
boat to the lobster ground (which is water) and
sinks his coop to the bottom, and anchors it to a
small buoy (one from eight to ten years will do),
and then goes home. When he feels like it again
—say in the course of a week or so—he goes back
and pulls up his poultry house, and if he has good
success he will find the game inside the coop.

As an article of food the real goodness of the
lobster is in the pith. Very few persons relish the
skin, and physicians say it is hard to digest. We
therefore take the lobster and boil it until it is
ready to eat. Nothing is better for colic than
boiled lobster. It will bring on a case when cucum-
bers have failed. For a sudden case we advise
them crumbled in milk. Eaten at the right time,
and in proper quantities, lobster stands second to
no fruit known.

OIL ON THE WAVES.—It is well known that the
ancient metaphor about "pouring oil on troubled
waters" to calm them is literally true; and ships
at sea have been saved from foundering by pouring
barrels of oil upon the waves around. A striking
experiment of the kind was recently made at
Peterhead, in Scotland, in order to allow a fleet of
fishing-boats to enter the stormy harbour with
their cargoes. By means of a reservoir and pipes
leading to the harbour, a stream of oil was dis-
charged upon the water, and spreading in a thin
film over its surface, reduced the rough waves to a
mere swell, and permitted the boats to land. The
chief action of the oil is probably to diminish the
friction between the wind and water, and thus pre-
vent the formation of waves, while the existing
motion of the water quickly subsides into a low
heaving. Probably the experiment, after the suc-
cess at Peterhead, will be repeated elsewhere.

A good wife is to a man wisdom, strength, and
courage; a bad one is confusion, weakness and
despair. No condition is hopeless to a man where
the wife possesses firmness, decision, and economy.
There is no outward propriety which can counter-
act indolence, extravagance, and folly at home.
No spirit can long endure bad influence. Man is
strong, but his heart is not adamant. He needs a
tranquil home, and especially if he is an intelli-
gent man with a whole head, he needs its moral
force in the conflict of life. To recover his com-
posure, home must be a place of peace and comfort.
There his soul renews its strength and goes forth
with renewed vigor to encounter the labor and
trouble of life. But if at home he finds no rest,
and there is met with bad temper, jealousy and
gloom, or assailed with complaints and censure,
hope vanishes, and he sinks into despair.

"I once knew a widow lady in Scotland who
had an only son. Upon him she had expended
much to enable him to acquire an education. He
was absent from home a long while attending
school. Having completed his course of studies,
he returned to his good old mother.

"Come, John," said she, on the night he arrived
home, and when they were about making prepara-
tions to retire, 'you've been a long time away from
me, my son, and have studied much. I know ye
are a good lad, but I have never heard ye pray.
Try it, John, for ye surely must know how, with
all the learning ye have got.'

"Accordingly John complied—made a long,
humble, and, as he supposed, satisfactory acknow-
ledgment of his sins and general unworthiness, and
of his great indebtedness to his Maker.

"Well, mother," says John, 'how did it suit
ye?'

"Pretty well—pretty well, John," replied the
old lady; 'but why didn't ye gie the old de'il a slap
or two?'

"Ah!" says John, 'not I—not I; for ye ken,
mither, there's nae of us kens whose hands we may
some time fall into!'

A young gentleman, who is very particular
about the getting-up of his linen, wrote a note to
his laundress, and at the same time sent one to the
object of his affections. Unfortunately he put the
wrong address on the envelopes and posted them.
The woman was puzzled, but not in the least
offended; but when the young lady read: "If you
rumple up my shirt bosoms and drag the button
off the collar any more, as you did last time, I
shall have to go somewhere else," she cried all the
evening, and declared she would never speak to
him again.

CREAM PIES.—One quart of milk, the yokes of
three eggs, two cups of sugar, two spoonfuls of
flour, or one of corn starch; boil this until it be-
gins to thicken. Make a rich crust, put in the
cream, flavor with lemon, and bake in a quick
oven. Beat the whites of the eggs stiff, and frost.
Put in the oven and color a little.

The editor of the Rochester Democrat gives this
receipt to kill fleas on dogs:—

"Soak the dog for five minutes in camphene,
and then set to fire. The effect is instantaneous."

Spanish brown, mixed with a little water,
will make the hearths look pretty. A pound costs
ten cents and will last two or three months; use a
little at a time.

The Dart Snake, or Milk Snake.

This truly pretty serpent is known by several names in different parts of the country. Thus, in the Eastern States it is generally called the "checkered adder," in the Middle States "milk snake," and in Maryland and Virginia "house snake." The name adder came originally from the Anglo-Saxon word *aetter* (poison), and is now generally applied to a venomous species, which our serpent is not. It is called "milk snake," I have been informed, for the reason that it frequents milk houses and drinks milk from the pans; yet I have been told by farmers living in districts where I knew these serpents to be numerous, that they were never found in their milk houses. It has occasionally been seen in cellars and outhouses, but so also have been garter snakes, black, brown, and other snakes. Consequently all of its common names are calculated to mislead in regard to its habits. I have taken the liberty to call it dart snake, which I merely take from its generic name, *Ophibolus*. Whether this name was given on account of the arrow, javelin, or spear-head mark on its head, or from its activity or flashy appearance, I am not certain, but in either case the name is quite applicable.

As regular steps of variation have been observed, from the red snake, *Ophibolus doliiatus* (Linn.), to our dart snake, its scientific name should be *Ophibolus doliiatus* (Linn.) *triangulus* (Boie). Cope. Dr. De Kay, in the "New York Fauna," named it *Coluber ezimius*, not knowing that it had previously been described by Boie as *Coluber triangulum*.

The dart snake is found from Virginia to Canada, and west to Wisconsin. It measures in length from 25 inches to 3 feet 5 inches. The ground color of the body is pale gray or ash, with from forty to fifty transversely elliptical dark-brown dorsal blotches, bordered with black, and one or two rows of small spots along the sides; beneath, white, checkered with dark brown or black spots.

Unlike our common garter and water snakes, whose young are at the moment of oviposition produced alive, this species is oviparous. The eggs are deposited under a pile of chips or dead leaves, where they are left to hatch. The young, when they first quit the egg, are about four inches in length, and are far prettier than the parent. The pots, which are brown in the adult, are bright and red in the baby snakes, and they then greatly resemble the typical red snake, *O. doliiatus*.

There is perhaps no snake more useful upon farms than this, for it is a great destroyer of field and meadow mice. I heard of one that was killed which had no less than four field mice in its stomach. I saw a farmer plow up in a short space of time two of these snakes, and in both cases he stopped his horses, pursued, and killed the snakes, and yet by so doing he was throwing away several bushels of grain. I have heard of one instance where one was killed in the act of devouring a young robin; but as the robin is a noted cherry and berry thief, and has a great fondness for the useful earthworm—nature's worker of the soil—he should be classed with the injurious rather than the beneficial birds, and so the snake may be excused this change of its bill of fare. I can accuse this snake of one bad act: A gentleman in New York State found one swallowing a garter snake. The gentleman wrote me that there was no doubt as to what species it was, for it agreed perfectly with a specimen in the museum labeled *Coluber ezimius*.—C. Few Seiss in Scientific American.

The mistress has gently reprimanded her maid for oversleeping herself in the morning. "You see, ma'am," explained the servant, "I sleep very slowly, and so you see, ma'am, it takes me much longer to get my full sleep than it does others. you see, ma'am."

Ready Wit.

History is full of examples of the success attained by quick-witted men. De Grammont, when a young man, waited on Cardinal Richlieu, and surprised the great Minister in the somewhat undignified amusement of leaping a wall. The Cardinal looked annoyed—a less ready-witted man would have apologized and retired. But De Grammont was wiser, and exclaimed, "I will wager that I can leap higher than your Eminence." The challenge was accepted. De Grammont was courtier enough to allow himself to be surpassed, and the Cardinal was his friend for the future. This readiness is confined to no rank of life. Horace Walpole gives an instance of it in a Paris fishwoman. The Dauphin having recovered from a serious illness, the "dames de la Halle" waited on the King (Louis XV.) to offer their congratulations. "What would have become of us had our Dauphin died?" said the spokeswoman; "we should have lost our all." "Yes," put in a second fishwoman, who observed the King's brow darken at this somewhat equivocal compliment to himself. "we should, indeed, have lost our all, for our good King would never have survived his son's death." It was ready wit that enabled William the Conqueror to persuade his followers that his fall, on stepping ashore in England, was an omen of good instead of evil fortune. "I have taken 'seisin' of this land," he exclaimed, rising with his hands full



DAK OR MILK SNAKE.—(*Ophibolus doliiatus* (Linn.) *triangulus* (Boie).)

of earth," and the ready turn dispelled the superstitious fears which the accident had occasioned.

The lower orders often possess great readiness at repartee. Few retorts are better than that of the pavior to Sydenham, the great seventeenth century physician. The doctor was complaining of the bad manner in which the pavement was laid in front of his house, adding, "And now you throw down earth to hide your bad work." "Well, doctor," said the man quietly, "mine is not the only bad work that the earth hides." Old biographers are fond of including "a ready wit" among the virtues of the subject of their memoirs; indeed, dull folks appear to have been looked upon in former days with extreme contempt. Dr. Johnson was very outspoken in his opinion regarding stupid people. Inveighing against a worthy but extremely foolish female acquaintance, a lady present reminded him that she was a very good woman, adding, "and I trust we shall meet her in Paradise." "Madam," roared the exasperated doctor, "I never desire to meet fools anywhere."—*London Globe*.

Two Irishmen were lamenting the illness of a friend who had been much brought down of late. "Its dreadful wake he is and thin, sure; he's as thin as the pair of us put together?" one of the sympathizers observed.

An Indian Dinner Party.

Born in 1822, Colonel Ramsay commenced his military career in the Scots Greys, but after a few years exchanged into the 14th Light Dragoons, then serving in India. He had been but a short time in India when he was appointed aide-de-camp to the Governor of Bombay, Sir George Arthur. At the first great dinner party his brother aide-de-camp was ill, and he had to pair off the guests, all strangers to him. To make matters worse, at the last moment many of the arrangements had to be altered.

"I got on very well until I came to a large, imposing-looking officer, and I said: 'Colonel D—, I believe?' He bowed assent. 'I see you are down on my list to take Miss A— down to dinner.' Sternly and briefly he replied: 'No, sir, I will not.' I stared at him speechless: and he said: 'Ah, I forgot; you are new on the island. That fellow D'Arcy is, I suppose, amusing himself in the jungles, so I may as well let you know I am a full colonel off pay and reckoning, and Commissary-General of the Bombay army, and my position entitles me to a married woman. I will take no miss down to dinner.' I smiled sweetly, and said: 'I have just come from a little place called England, and there we are very fond of taking young ladies down to dinner, and the older we get the more we like it.' 'I know nothing about England,' he replied; and off he went again—the old refrain, full colonel, commissary-general, etc., etc. I was obliged to tell him that he had been originally marked off for a married lady, but, owing to the numerous apologies, there was now none available. The next officer I came to was standing by laughing. I said: 'Colonel B—?' He bowed. I then told him how delighted I was to find that he had a married lady. He inquired her name. I told him. 'No, sir,' he said hastily. 'I cannot; I have not spoken to her for twenty years.' I was in despair. However, the two great men went down good-naturedly together."—*From the Athenaeum*.

A LESSON IN NATURAL HISTORY.—A lecturer on natural history was called upon the other day to pay for a live rabbit he had in a basket in a railway carriage, and which the ticket collector said would be charged the same as a dog. The lecturer vainly explained that he was going to use the rabbit in illustration of a lecture he was

about to give in a provincial town; and indignantly taking a small live tortoise from his pocket, said, "You'll be telling me next that this is a dog, and that I must pay for it." The ticket-taker went for superior orders, and on his return delivered this lecture on natural history: "Cats is dogs, and rabbits is dogs; but a tortoise is a hinsect."

Says Captain Marryat: "What a miserable being must an old bachelor be—he vegetates, but he cannot be said to exist—he passes his life in one career of selfishness, and dies. Strange that children, and the responsibility attached to their welfare, should do more to bring a man into the right path than any denunciations from holy writ or holy men. How many who might have been lost have been, it is to be hoped, saved, from the feeling that they must leave their children a good name, and must provide for their support and advancement in life. Yes, and how many women, after a life so frivolous as to amount to wickedness have, from their attachment to their offspring, settled down into the redeeming position of careful, anxious, and sober-minded mothers.

A HOT TIME!—Clerk: "I feel ill, sir; I want to go to the seaside." Guv'nor: "I feel ill, too, and I've been to the seaside. Better stop where you are!"

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES.—This is the great season for exhibitions and fairs of all kinds; they are becoming customary in nearly every part of the globe. I wonder how many of my boys and girls have not attended some exhibition. Although Uncle Tom is getting to be a pretty old man, still he must attend the exhibitions, at least some of them, for not having the power of being in two places at once, he was obliged to miss some of them. Now cannot each of my nieces and nephews write me a letter telling of the exhibitions they have seen? Thus Uncle Tom may learn what he has missed by not attending all.

Many people consider these fairs very tiresome, which they may be to a certain extent, but how nice to watch the grand machines that perform so much which formerly was done by hand! Then if you are fond of animals, you will take pleasure in seeing the fine specimens shown there. The flowers and fruit are a great attraction to most everyone; the latter, especially, makes your mouth water. I know just how you feel, for I was young once myself. Oh! if I could only have one of those luscious peaches or a bunch of grapes! Isn't that the way? You cannot fool your old Uncle Tom.

Perhaps, in the excitement and pleasure of examining some things that particularly interest you, your party unconsciously wander away and leave you in the midst of strange faces; the next thing is to try and find them, which is almost as bad as "looking for a needle in a hay-mow," as the saying is, and often the more you search the more confused you become; but just as you have given them up for lost, those dear familiar faces reappear, as if they had dropped from above. Once more you begin sight-seeing; at every turn something of interest is seen. After spending several hours in this way you begin to feel weary and think of taking your departure for home, quite satisfied in your own mind that you have seen all that was worth seeing; however, in talking it over in the family circle, you find that others had seen plenty of things which had escaped your notice. So my advice to you is, when you go to an exhibition be sure and have your eyes wide open, ready to take in everything, for everyone is improved by seeing and examining into things they formerly knew nothing of.

UNCLE TOM.

Boil it Down.

Whatever you have to say, my friend, Whether witty, grave or gay, Condense as much as ever you can, And say it in the readiest way; And, whether you write on rural things, Or particular things in town, Just a word of friendly advice— Boil it down.

For if you go spluttering over a page When a couple of lines would do, Your butter is spread so much, you see, That the bread looks plainly through; So, when you have a story to tell, And would like a little renown, To make quite sure of your wish, my friend, Boil it down.

When writing an article for the press, Whether prose or verse, just try To utter your thoughts in the fewest words, And let it be crisp and dry; And when it is finished, and you suppose It is done exactly brown, Just look it over again, and then— Boil it down.

For editors do not like to print An article lazily long, And the general reader does not care For a couple of yards of song; So gather your wits in the smallest space If you'd win the author's crown, And every time you write, my friend, Boil it down.

PUZZLES.

- 1.—My whole is composed of 10 letters and is a large commercial city in England. My 8, 2, 10 is a sailor. My 7, 9, 2, 8 is a form. My 5, 2, 1 is part of a pig. My 6, 3, 8, 6, 10 is to appear. My 4, 2, 8 is an animal. My 5, 6, 2, 8 is to warm. My 3, 6, 8 is an article used in fishing. ELIZABETH E. RYAN.

ANAGRAM.

- 2.—Ebeevli nto hacc canciusg gtoune Sa mose aewk ppoeel od Nda llsti ebeville hatt rosty ornwg Hihcw gthuo tno ot eb uefr. LIZZIE McLAUGHLIN.

TRANSFORMATION.

- 3.—Whole, you will see, I'm worn by men, Cut off my head and you'll see then That I'm a pest to farmers all; Curtail me now, I'm very small; Curtail again and then you'll see That now I mean both you and me, A. J. TAYLOR.
- 4.—A luminary, a pronoun, part of the body, A chattering bird, a girl's name, no. Initials and finals read downwards Give the names of two countries of Europe. A. J. TAYLOR.

RIDDLE.

- 5.—Take nine from six, ten from nine, fifty from forty, and have six remaining. J. McC.

WORD SQUARE.

- 6.—Part of the body. To come in, to reconcile, gaps, a ringlet.

\$100 PRIZE REBUS.

If you have or will



send in the correct answer.

\$100 is now offered in prizes for the correct answers to the above rebus. The answers are to be solved by the individuals themselves, both correctly and conscientiously; the answers to be in the office by the 25th of October.

The prizes are offered in the following manner: \$50 to the first sending correct answer from any member of the House of Commons or the Senate of Canada.

\$25 to the first correct answer from any member of the Provincial Legislatures of Canada.

\$12 for any member of the Boards of Agriculture in any of the Provinces.

\$6 for the first answer from any Public Officer in the Dominion.

\$1.50 to the first subscriber who sends in a correct answer; \$1 to the first lady, 50 cents to the first contributor to or member of Minnie May's family, and \$1 for the son or daughter of a subscriber. \$1.50 to the first farmer, farmer's wife, son or daughter; 50 cents to any of Uncle Tom's nephews or nieces, and \$1 for the answer accompanied with the best, most useful essay on the answer, the essay not to exceed one column in length and not less than half a column; to be written or composed by one of Minnie May's nieces.

To entitle any one to receive any of the sums over \$1, real proof must be furnished that they have really and practically earned the prize. Each person must say which prize they compete for, and no person can gain more than one prize.

Answers to September Puzzles.

1.—P R A T E R I P E N A P A R T T E R S E E N T E R

- 2.—Ostrich.
- 3.—Victoria.
- 4.—Maple. Birch. Pine. Elm.
- 5.—Genoa. Athens. Oxford. Omaha.
- 6.—1 Scamp, 2 Coat, 3 Speck, 4 Strap, 5 Flower, 6 Squills.
- 7.—William Weld.

ILLUSTRATED REBUS.

- 8.—"He who by the plow would thrive Himself must either hold or drive."

Names of those who sent Correct Answers to September Puzzles.

C. Gertie Heck, Charles French, Louie Meston, J. A. Key, C. G. Keyes, Fred Mills, Richard Kingston, Esther Louisa Ryan, A. J. Taylor, Carrie May Thompson, A. Phillips, Ella McNaughton, Thos. Kennedy, Mary Lester, Annie Farmer, Cecil Shinner, George B. Jones, Bertha Henderson, Ella A. Andrews, Tom Haigert, Gussie Gordon, Charles S. Husband, Minnie G. Gibson, Jessie Oliver, C. Stevens, W. H. Bateman.

HUMOROUS.

Rector (whose curate has lately left the parish,) visiting old woman: "Well, Betty, I expect you will miss Mr. Robinson a good deal?" Betty: "Oh, yes, sir! He was a beautiful young man, sir!" Rector: "Well, he was a very good man, Betty; but I don't know about his being exactly beautiful." Betty: "Oh, he weren't much to look at in the face, I know; but, lor', sir, his inwards was lovely."—[Judy.

The obliging visitor, to show that he is really fond of children, and that the dear little one is not annoying him in the least, treats the kid to a ride upon his knee. "Trot! trot! trot! How do you like that, my boy? Is that nice?" "Yes, sir," replies the child, "but not so nice as on the real donkey, the one with four legs!"

A Leadville preacher is visiting in Philadelphia, and some brother clergymen noticing that he did not carry a watch, asked him how he managed to time himself during his sermons. "Oh, that is simple enough," replied the Leadville apostle. "I keep right on until the revolvers begin to click, and then I know it is time to stop."

PRESENCE OF MIND.—Visitor (in Cathedral town, desirous of information and willing to pay for it, to respectable-looking party, whom he takes for a burgher): "I suppose now these cloisters"—(slips florin into his hand)—"are not older than the sixteenth century?" Respectable party: "Well, sir, I'm sure I"—pockets the coin—"thanky, sir, can't say, sir: 'cause I'm a stranger 'ere myself!"—[Punch.

A HARD FATE.—Bengal widows have rather hard lives, if the following be true:—The very day a wife becomes a widow, her colored clothes, silver and gold ornaments, are all taken off. Henceforth she has to dress in white, and wear no ornament of any kind during her lifetime. Her daily meals are reduced to one, and that is prepared in the simplest way possible. She is strictly prohibited the use of any sort of animal food. Each widow is required to cook her own food, and to abstain entirely from food or drink for two days in every month. On the fast days, when the burning sun dries up the ponds and scorches the leaves of the trees, these poor victims faint and pant in hunger and thirst. If they are dying on the aku thusty day, a little water will be put on the lips merely to wet them. They have no hope of ever cheering their widowhood in the world. For their sakes, we are glad to learn that a learned Brahmin is earnestly engaged in redeeming the condition of the widows, by introducing the system of widow marriage.

The School-Boy.

We bought him a box for his books and toys,
And a cricket bag for his bat;
And he looked the brightest and best of boys
Under his new straw hat.

We handed him into the railway train
With a troop of his young compeers,
And we made as though it were dust and rain
Were filling our eyes with tears.

We looked in his innocent face to see
The sign of a sorrowful heart;
But he only shouldered his bat with glee
And wondered when they would start.

'Twas not that he loved not as heretofore,
For the boy was tender and kind;
But his was a world that was all before,
And ours was a world behind.

'Twas not his fluttering heart was cold,
For the child was loyal and true;
And the parents love the love that is old,
And the children the love that is new.

And we came to know that love is a flower
Which only groweth down;
And we scarcely spoke for the space of an hour
As we drove back through the town.

Boys and their Mother.

Some one has written beautifully to the boys in the following manner. Here is a whole sermon in a few sentences:

Of all the love affairs in the world, none can surpass the true love of the big boy for his mother. It is pure love and noble, honorable in the highest degree to both. I do not mean merely a dutiful affection. I mean a love which makes a boy gallant and courteous to his mother, saying to everybody plainly that he is fairly in love with her. Next to the love of a husband, nothing so crowns a woman's life with honor as this second love, this devotion of a son to her. And I never yet knew a boy to "turn out" bad who began by falling in love with his mother. Any man may fall in love with a fresh-faced girl, and the man who is gallant with the girl may cruelly neglect the worn and weary wife. But the boy who is a lover of his mother in her middle age is a true knight, who will love his wife as much in the sere-leaved autumn as he did in the daisied spring-time.

IGNORANCE.—Two gentlemen of the opposite politics meeting, one inquired the address of some political celebrity, when the other indignantly answered:—

"I am proud to say, sir, that I am wholly ignorant of it."

"Oh, you are proud of your ignorance, eh! sir."

"Yes, I am," replied the belligerent gentleman, "and what then, sir?"

"Oh, nothing, sir, nothing; only you have a great deal to be proud of, that's all."

"Down, outside!" as the fiddler said when he had fallen out of the window.

Mrs. Partington says she was much elucidated last Sunday, on hearing a fine concourse on the parody of the prodigious son.

Among the titles of the King of Ava are "absolute master of the ebb and flow of the sea, brother to the sun, and the king of the four-and-twenty umbrellas."

A true picture of despair is a pig reaching through a hole in the fence to get at a cabbage that lies only a few inches beyond his nose.

A little boy, not over ten years of age, was seen the other day cramming his mouth with "Cavendish," when a gentleman standing by, somewhat amused at the spectacle, asked him what he chewed tobacco for? "What do I chew tobacco for?" replied the urchin, "why, sir, I chew it to get the strength out of it, to be sure—what d'ye think I chew it for?"

A SMOKER EXTINGUISHED.—An elegantly-dressed and aristocratic-looking young lady entered a first-class railroad car at the Paris depot, a few years ago. The car was occupied by three or four gentlemen, one of whom, at the moment of her appearance, was in the act of lighting his cigar. He made a significant grimace, and with the characteristic politeness of a Frenchman, said, "Would smoking incommode you, madam?"—"I do not know, sir: no gentleman has ever yet smoked in my presence?" He put out his cigar.

GRAND PREMIUMS

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a strong, vigorous evergreen, with pure white flowers, changing to yellow. Very fragrant, and is covered with flowers from June to November.

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a most attractive creeper, with its beautiful berries and foliage; a rapid grower and very hardy. No vine more rapidly covers a wall, stump, or even a heap of stones. (See October No., 1880, of FARMER'S ADVOCATE.)

Or in the Spring of 1883 we will enter you to receive for EACH NEW SUBSCRIBER 3 plants (6 to 12 inches) of the
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(See cut and particulars of this useful and celebrated plant in March No., 1882.) or

A Collection of 15 Varieties of Flower Seeds, and One Packet of a Choice Novelty for 1883.

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The above Seeds will be put up expressly for our Prizes by one of our best seed firms under a guarantee that they are first-class in every respect. The plants and seeds will be forwarded in the proper season by mail, postage pre-paid.

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Your choice of the Lithograph of
"Lorne and Louise,"
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the fine Chromo-Lithograph of
"Balmoral Castle,"
Or the "Game of Botany,"

a most desirable game for children in playing the elements of the science of Botany.

AGENTS WANTED IN EVERY COUNTY.

N.B.—New Subscribers, whom you send in during October and November, for 1883, will receive November and December numbers FREE.

OUR RULES.

The name sent in must be a new one, and the subscription for one year (\$1.00) must be enclosed.

The prize is for the agent who sends in the new name, and not to the new subscriber.

Choose your prize when remitting, otherwise a choice may be made for you.

Sample copies, posters and prospectuses, with cash commission allowed, sent on application.

T. C. Robinson, nurseries, Owen Sound, Ont., has issued a neat, practical and telling fall catalogue of small fruits and grape vines. Send for one.

Thinking men are rapidly being convinced that a good individual animal without an authenticated pedigree is more profitable and desirable from every point of view than an inferior beast, whose only recommendation is the fact that the register contains his name and the history of a family of which he is a degenerate scion.

Until lately I have had trouble with calves learning to drink too quickly, being obliged occasionally to let them have a finger to suck, so that they should not gorge themselves. Now I find by feeding for the first ten days or so in a shallow tin vessel, and only pouring in one-half inch in depth of milk at a time, they take the milk with the tongue just touching the bottom of the vessel, and so partly suck; in that way the time occupied with the meal is about eight minutes; in drinking in an ordinary way a calf will dispose of a gallon of milk in something like two minutes.—[Stephen Allen-Olney.

American Opinion of our Provincial Exhibition.Prof. L. B. Arnold in *Live Stock Journal* says:

The annual fair of Arts and Agriculture for the Province of Ontario, held at Kingston, Sept. 18-23, was a very successful enterprise, as far as a large collection of materials was concerned, but the weather seriously interfered with the attendance of visitors. The show of stock of all kinds was unusually liberal, and that of beef and milk stock especially attractive and numerous.

The exhibit of cheese, consisting of over one hundred in number, was of higher quality than any I ever saw at any public show, and I have seen a good many in the best cheese-producing districts of this country. The samples came chiefly from Eastern Ontario, and are a credit to the cheese-producing capacity of that section.

The exhibit of butter was moderate, and barely creditable. I send you a brief sketch of tests for a special prize of \$60 to be divided among the three best cows for milk, quantity and quality considered, not because there is anything extraordinary about it, but because I thought it might possibly interest some of your readers to know what cows the farmers around Kingston thought worthy to compete and how the tests were managed.

The cows were entered for competition—five Jerseys, three Ayrshires, one grade Short-horn and one grade Galloway. When the committee for making the test called for the cows, the owners of the Jerseys all refused to come forward unless the test should be made on quality alone, which, being contrary to the conditions on which the prize was offered, could not be done; so they omitted to appear. The Ayrshires and the grades only competed. The test began by having all the cows brought into the ring at 5 p.m. of the day previous to the test, and all milked at the same time by the competitors, each cow being milked by some one else than her owner. This was done to secure thorough milking. No one would be willing to leave any milk in the bag of his competitor's cow. Next morning, at 8.30, they were brought into the ring again. At this time each cow was milked by its owner in the presence of the committee, who took the milk and weighed, and took a sample of each set in glass tubes graduated into one hundred parts, and set the tubes into an iced vessel, to test the percentage of cream. The same operation was repeated at 5 p.m. The total of each cow's milk was then multiplied into its percentage of cream and the product used to represent the comparative value of the milk of the respective cows. The result may be thus tabulated:

No.	Time in Milk.	Daily Yield.	Percentage of Cream.	Productive Value.
No. 1 Shorthorn grade.....	5½ months	30 lbs.	17	510
" 2 Galloway grade.....	2 weeks	34 lbs.	14	476
" 3 Ayrshire full blood....	3 "	30½ lbs.	14	423.5
" 4 Ayrshire full blood....	4 "	31½ lbs.	12	378
" 5 Ayrshire full blood....	5½ "	32½ lbs.	11	357.5

Owing to a misunderstanding, the second milking of the Galloway grade was not made in presence of the committee, and she was not allowed to compete; but as there was no doubt about the honesty of the milking, her milk is included in the list.

The cows were all from the vicinity of Kingston; and being suddenly changed from pasture to dry feed, gave less than their usual messes. No. 1 was said to have shrunk 12 pounds, her previous yield being 42 pounds daily, averaging a pound of butter to 24½ pounds, equal to 12 pounds of butter a week.

When there was such a large number of cows on exhibition with enormously inflated claims for excellence, the very small number which dared to risk their reputation by a public test, throws a little suspicion over the sincerity of published pretences. The withdrawal of all the Jersey men was especially significant.

The manner of testing pursued by the committee in charge deserves a few words of comment. It is open to criticism as not being strictly exact, though it was the best the committee had time and means to make, and was, perhaps, sufficiently exact for the occasion. In the first place, cream by volume is not a reliable and exact test of value. Though raised in vessels exactly alike, and at the same temperature, the volume of cream might differ considerably and yet be alike in value. It might

easily vary 50 per cent. in butter-making value. Small cream globules do not separate so fully from the milk as large ones, and hence make a cream less rich in butter than large ones; and the latter make a cream poorer in butter than where the globules are of very unequal size; in which case the smaller globules nestle in among the larger ones, adding little or nothing to the bulk, while they contribute to the yield of butter; just as bullets and shots may nestle among cannon balls without adding anything to volume, while they would increase the weight of a given bulk.

The Ayrshires were at a disadvantage in this trial, since the cream globules of that breed are noted for being very unequal in size, and making a very compact cream, rich in butter. Since the size of cream globules diminishes as the distance from the time of calving increases, they might in the Short-horn grade be reasonably expected to be small in comparison with those in the milk of cows recently in, and hence to make a cream carrying with it a comparatively larger proportion of milk and a smaller proportion of butter. The fact that it required 24½ lbs. of milk yielding 17 per cent. cream, raised in cool air, to make a pound of butter, corroborates the supposition that it carried with it a pretty large proportion of milk. That percentage of cream, if of average quality, ought to require less than 20 lbs. of milk for one of butter. The only reliable and exact way to test the value of milk for butter is by churning. Secondly, in this way of testing, it was assumed that the milk after the cream was off was all equally rich in cheesy matter and other constituents, which might or might not be true. This might be determined approximately by curdling the milk, and exactly by desiccation and weighing the dry solids.

Request to our Readers.

Our request is that each one of our readers would take a little pains, and, during the coming autumn and winter, introduce the ADVOCATE to some friend who is or ought to be interested in the prosperity of agriculture. Use your influence and obtain \$1 from a new subscriber. There are hundreds in each section who do not take the ADVOCATE whom it would benefit many times its cost. This you know, and by sending us one new subscriber each you would confer a benefit on us, on your neighbor and on yourself. Is there any manner in which they could expend \$1 to better advantage to themselves and their families? As our subscription list has every year increased, your paper has been improved. Aid us to continue our well doing. There always have been and always will be opponents to every good cause. If you find in your canvass a wilful opponent to right, pity, but do not censure him. If you find one in ignorance of right, try to convince him. To those who will accept a small recognition of their trouble, we will with pleasure send one of our prizes. We have selected such as we believe will be of use, profit and pleasure to every one. To those who will act as local agents we will send good inducements for them to exert themselves, but each one can help a little. If there is a will there is a way.

New rope for halters, etc., may, *The Ohio Farmer* says, be rendered permanently "limber and soft" by boiling two hours in water and then drying in a warm room.

At the Montreal Exhibition Messrs. Wm. Parks & Son, of St. John, N. B., make their usual good display of knitting cottons, goods most favorably known; also, carpet and beam warps, sail yarn, apron checks, etc., and have added some eight or ten first prizes to their list of laurels, among them being a prize for best general display.

J. A. Simmers, 147 King Street East, Toronto, has issued his usual catalogue of Dutch Flowering Bulbs, &c. There is not a more desirable class of flowers than the Dutch bulbs, but the buyer wants them true to name or color, and sound. We can recommend you to give Mr. Simmers a trial.

"Please show our paper to your friends; they may subscribe."

Stock Notes.

Stock raisers are directed to an article in this issue on the Hurdle system of grazing, from the *Live Stock (Eng.) Journal*, and are referred to an illustrated article on the same subject in our May number of 1881, page 112.

Geo. Whitfield, of Rougemont, P. Q., has presented the Agricultural College at Guelph, Ont., with a fine West Highland bull.

Mossom Boyd, Big Island stock farm, Bobcaygeon, Ont., has purchased from Geo. Whitfield, of Rougemont, P. Q., 5 head of Polled Angus Heifers, at a very high figure.

The noted Clydesdale mares "Lovely" and "Nancy," imported in May last by Mr. Robt. McEwen, of Alloway Lodge, Westminster, arrived in London on 19th Sept., and were taken to the above farm. They were exhibited at the Western Fair.

The first volume of the British American Short Horn Herd Book is now in the hands of the printer, and it is expected will be out by the end of October. The book will be supplied to members of the Association free, and to non-members at \$2.00. J. C. Snell, Cor. Sec.

Powell Bros., Springboro, Pa., U.S., announce the first arrival of their fall stock importations. Three large shipments reached them the first week in September, and they had advice of six others on the way. The senior member of the firm is now in Europe supervising their large purchases.

Mr. T. C. Patteson, of Eastwood, has imported thirty more Shropshire ewes, which reached Quebec last week in good order by the SS. Quebec, of the Dominion Line. They were bought at the great autumnal sale at Shrewsbury, from the flocks of Lords Powis, Chesham, and Willoughby de Broke.

John Snell's Sons, Edmonton, report a fine demand for first-class Cotswold sheep, at good prices. They have lately sold ten ram lambs to different parties in Canada and the United States, at an average of \$55 each, including one extra ram lamb sold to Mr. J. H. Ranson, of Jacksonville, Ill., for \$100.

Mr. John Thornton will sell by public auction on Thursday, October 26, about fifty Shorthorns, the property of B. St. John Ackers, Esq., at Prinknash Park, Gloucester, including many first-class animals of Booth blood that have been prize-winners. Catalogues may be had of John Thornton, 7 Princes Street, Hanover Square, London, W. England.

Your attention is called to the sale of Jersey cattle by Messrs. Cooke & Smoke, at Woodstock, Ont., on the 26th inst. These cattle, twenty-eight head, are from imported stock, fine milkers, and in good condition. The sale is imperative and without reserve, on account of the termination of a partnership. Send for a catalogue and attend the sale.

Copenhagen, the charger ridden by the Duke of Wellington the entire day of the battle of Waterloo, was born in 1808, passed his last years in a little paddock on the estate of Strathfieldsaye, receiving, it is said, a daily allowance of bread from the hand of the Duchess, who wore a bracelet made of his hair; died and was buried with military honors in 1834, and has a massive memorial stone with appropriate inscription.

GEARY BROS. POLLED ANGUS SALE.—Geary Bros., London, Ont., on Sept 20th, sold at Dexter Park, Chicago, a herd of Polled cattle at remarkably good prices. The lot included 14 cows and heifers, which sold at \$305 @ \$1,555, making an average of \$741. Of bulls, 5 head sold at \$315 @ \$800, averaging \$429. The sale was well attended, and bidding lively, soon over. They also sold a Hereford heifer at \$275.

The high prices of Hampshire Down sheep have been again illustrated at the sale of the well-known breeding flock of the late Mr. Edward Waters, near Salisbury. Nearly 1,000 ewes and lambs were offered. Sir Edward Hulse, Bart., bought at 102s. per head a prime lot of the four tooth ewes, which averaged 76s. 8d. The two-tooth ewes ranged from 64s to 102s., Mr. Lyne buying at the latter figure. The six-tooth ewes fetched from 66s. to 87s., the average being 74s. 8d. The full-mouth ewes sold at 63s to 78s., average 68s., and the chilver lambs 48s. to 90s., average 56s. Two-tooth rams ranged from 4½ gs. to 11 gs. per head.

Sir William G. Armstrong, K. C. B., has sold from his Bates herd at Cragside, Rothbury, two cattle to Mr. R. Gibson, Ilderton, Ontario, Canada, who will take them, with selections from other herds, to that country. The Cragside pair are Wild Duchess of Geneva 3rd, a red eight-year-old daughter of the Brailes Duke of Geneva 9th 23,381 and Wild Oxford. Her red bull-calf of April last, by Duke of Oxford 48th, accompanies his dam.

This is all about an old polled cow:—"Poor old lady! Age was now telling heavily on her, and she could not support her calf. Consequently it had to be put on another cow to nurse. Grannie did not seem to understand this, and she mourned over her lost child for many a day. No caresses from old Jamie Thompson could soothe her. She would follow him about the field, moaning, talking to him, seemingly asking him what he had done with her baby; actually tears of sorrow rolled down her old sweet maternal face. Lord bless our *doddit* Grannie." Nothing in Shorthornology beats this. It is quoted by the *Breeders' Gazette* from a history of Old Grannie, by Mr. W. Watson, son of the breeder, Mr. Hugh Watson, of Keiller.

J. G. Snell & Bro., of Edmonton, Ont., report sales to Samuels & Sons, Pleatsville, Ky., 10 Cotswold lambs and 4 Berkshires; S.W. Macy, Colfax, Iowa, 1 boar and 2 sows; F. G. Fauquier, Ilfracombe, Muskoka, 1 boar; John McKellar, Belmont, Ont., 1 boar; R. J. Turner, Brucefield, Ont., 1 boar; Dalton McCarthy, M. P., Barrie, Ont., 1 imported boar; John Clugston, Rocklynn, Ont., 1 boar; W. J. Winter, Massie, Ont., 1 imported boar; Louis Wigle, M. P., Leamington, Ont., 1 boar; W. Shepherd, Imotitition, Muncy, Ont., 1 boar; A. Terrill, Wooler, Ont., 1 imported boar; Walker & Sons, Walkerville, Ont., 1 boar; B. McNichol, Orangeville, Ont., 1 sow; John McDonald, Dundalk, Ont., 1 boar; Robert Kerby, Guelph, Ont., 1 boar; James Caldwell, Jarvis, Ont., 1 boar; H. Snell & Sons, Clinton, Ont., 1 boar; David Nichols, Glendale, Ont., 1 boar.

The L. & N. W. R. R. are making a large yard at "Crewe" for the disposal of foreign and English live stock; also abattoirs for that left on hand. They are going to appoint auctioneers. They have bought 40 acres of land which cost £1,000 per acre, and are laying out 5 acres to start on immediately after Christmas, the remainder to follow. Stock from Canada and elsewhere can arrive in that yard (via Hollyhead) 18 hours before they could be landed at Liverpool; and Crewe being nearer the centre of England, and within easy access of those who have to buy food for millions of our people, it is bound to become a great mart very soon. It will also be a good centre for store stock to be sent to; there is a great demand for that now. From the Board of Trade returns, England is one million cattle and over six million sheep short to what we had four years ago.

Messrs. Rogers, Hamar and Pie inaugurated on the 30th of August last year their annual sale of rams and stock ewes. On August 15th of the present year the number of rams and ewes in the catalogue was an increase over the number disposed of at the first sale, there being about 60 rams and 1,100 ewes. In introducing the first lot, Mr. Thos. Rogers pointed out that all the lots mentioned in the catalogue were present, with the exception of one lot. Speaking of the Shropshires he remarked that Hereford cattle and Shropshire sheep were the leading features at this year's Royal and other agricultural shows, and for both those breeds the demand was becoming keener. The sale then proceeded. There were many pens of grand sheep among the various breeds, and the black-faced (Shropshire) ewes and rams were looking firm and very much better even than that breed showed up at this sale last year. Mr. Pulley's Shropshire Down rams included one by Colossus, which was hired in 1875, at 75 gs., and sold next year for 90 gs. Colossus was by Hereford, a ram which was bred by Mr. Pulley. The second ram was by Grand Duke, hired by Mr. Pulley for half the season at 50 gs. The third was by Old Sultan, purchased by Mr. Pulley for 250 gs. Another was by Dorchester Hero, a great prize winner, and sire of Hereford. The dams of Mr. Haywood's rams were by Lord Odstone, with pedigrees extending further back.

We would be very unwilling to dispense with its monthly visits. Our scientific farmers, of which we have a very respectable number, all place the FARMER'S ADVOCATE at the head of the list of agricultural papers. Yours respectfully, J. WOODSBURY, Middleton, N. S.

Commercial.

THE FARMER'S ADVOCATE OFFICE,
London, Ont., Oct. 1, 1882.

The weather the past month has been all that could be desired, with one exception, and that is the want of sufficient rain to facilitate seeding operations. Still there has been a good breadth sown, and, in fact, there is a good deal of seeding only just done, and some yet to be done. Should October continue dry and cool, the wheat plants will have a poor provision for winter.

WHEAT

Has had a very decided downward tendency for a long time, and seems to have about touched bottom; still, with the immense crops in prospect from all quarters, we cannot look for very much, if any, improvement over present prices. Freights are likely to be a prominent feature in the keeping of prices low, particularly after the close of navigation; there is certain to be a marked advance in inland freights, and we cannot count on a corresponding advance at English, German and French ports, as these markets will likely be liberally supplied from sources other than American ports, while in the spring they count on liberal supplies of new wheat from Australia and the Pacific coast. We shall not be surprised to see freights 15 to 20 cents per bushel higher this winter over last. This alone is a considerable decline. The rapid increase in the area under wheat in all parts of the world the past few years, has changed the situation very much, and any one not familiar with this great change will be very likely to be led astray. The movement so far this fall has been almost nothing compared with the past two or three years, seven farmers out of ten seem inclined to hold their wheat. Whether this will have any effect on the market remains to be seen. The sample throughout Western Ontario will be somewhat irregular, and more or less damp and sprouted, although some sections are much worse than others for this. Others again, who threshed early and have not attended carefully to their wheat, will find it musty. There is an enormous crop of wheat all over America, and, no doubt, many farmers will be slow to market their wheat at these prices.

BARLEY.

The low price of wheat no doubt will stimulate farmers to bring their barley to market first, and we may look for a pretty free movement in barley the coming month.

PEAS

Where not drowned out with the wet, the crop will be a pretty good one. No doubt a good many of these will also be marketed before the wheat.

OATS

Are not nearly so fine as last season, being light in weight, and the yield per acre will be a long way short of last season.

CORN.

The weather the past six weeks has been most favorable for the maturity of the corn crop, both in Canada and all through the States. The estimates for the United States put the corn crop of 1882 at 50 per cent. larger than 1881, and 5 per cent. larger than 1880. This estimate was made at the end of August, and the unusually favorable weather all through September will tend to raise this estimate even higher. As a large number of our farmers are interested in feeding stock, this will be of interest to them.

APPLES.

The Chicago Inter-Ocean says of this year's apple crop:

It is generally admitted that New York and Canada will have a light crop. Michigan will vary from a quarter to a half crop, while Illinois and

Missouri will probably have the largest and best crop of apples gathered for many years. While the East may have only a light crop, it must not be presumed that there will be no apples to ship from those States, as a short crop in nine cases out of ten is greatly under-estimated. However, allowing there will be a short crop, the liberal crop in Illinois and Missouri will no doubt make up the deficiency in the East. Besides, other Western States which do not ship apples will have a good crop for their own use, and there may not be so urgent a demand from interior points as usual, and the present outlook warrants dealers in making the statement that the public need not fear very high prices for apples the coming winter.

The foreign crop of apples it is reported is almost a failure, and reports from abroad intimate that large importations of American apples will be required. This will tend to enhance the value of apples to some extent, and a good trade will no doubt exist during the fall and winter months at reasonable prices.

CHEESE

Has ruled extremely dull for the past 3 or 4 weeks, and there is no life in the trade. The shipments are not excessive, and much behind that of last year this time. But the trouble seems to be that prices have been too high all summer, and the result has been that the consumption has been very much decreased from this cause. The shipments from New York up to 31st of August, have been— for 1881, 83,085,539 lbs.; for 1882, 60,613,216 lbs.; decrease in 1882, 22,472,723 lbs., or about 400,000 boxes. Part of this decrease, however, is made up by an increase of the shipments from Montreal up to 31st of August, of about 90,000 boxes over same date last year. There is a large percentage of the August cheese in Canada still on the factory shelves, and much of it is in very poor condition, and would be much better away and into consumption. The make of September and October will be unusually fine, and we may look for some improvement later on. Still, should factory-men have to sell August, September and October at 11 cents, they will have made a good average for the year, as there has been no serious decline this summer. We hear of 11 for August and 11½ for Sept. and Oct. having been accepted for some few lots.

BUTTER

Rules steady, and no doubt strictly fine butter will be wanted, and will command good prices from this out. Those farmers who have held their summer butter will not get the price for it that fine, fall-made butter will command.

FARMERS' MARKET.

LONDON, ONT., Oct. 5th, 1882.

Red wheat... 81 45 to 81 65	Eggs, small lots* 22 to 28
Deil... 1 50 to 1 65	Potatoes, bag 60 to 75
Treadwell... 1 40 to 1 55	Apples... 1 00 to 1 75
Clawson... 1 40 to 1 55	Tomatoes, peck 14 to 15
Corn... 1 50 to 1 70	Roll butter... 25 to 28
Oats... 1 40 to 1 55	Tub " 16 to 18
Poultry (Dressed)—	Crock " 20 to 18
Chickens, pair 0 50 to 0 70	Cheese, lb 12 to 12½
Ducks, pair... 0 65 to 0 70	Onions, bush 1 00 to 1 10
Geese, each... 0 50 to 0 60	Honey... 20 to 00
Turkeys, each 1 00 to 1 50	Tallow, clear... 7 to 7
Poultry (Undressed)—	" rough... 4 to 5
Chickens, pair 0 50 to 0 50	Lard, per lb... 14 to 15
Ducks, pair... 0 60 to 0 60	Wool... 20 to 20
Hops, 100 lbs. 21 00 to 30 00	Clover seed... 5 00 to 6 00
Live Stock—	Timothy seed... 3 00 to 3 25
Milk cows... 30 00 to 50 00	Hay, per ton 10 00 to 11 00
Live hogs... 8 00 to 8 00	

FLOUR AND MILL FEED.

Pastry Flour... 2 75	Wholesale	2 75	Retail	2 80
Family... 2 25		2 25		2 50
Oatmeal, fine... 3 00		2 75		3 00
" coarse... 2 25		3 00		3 25
Commeal... 2 25		2 25		2 50

TORONTO, ONT., Oct. 5th.

Wheat, fall... \$ 90 to \$ 94	Apples, bri... 1 50 to 2 25
Wheat, spring 1 04 to 1 05	Tomatoes, bu. 0 50 to 0 75
Wheat, goose... 0 78 to 0 78	Beans, bu... 1 00 to 0 60
Barley... 0 80 to 0 82	Onions, bu... 1 00 to 0 00
Oats... 0 39 to 0 40	Chickens, pair... 0 40 to 0 60
Peas... 1 00 to 0 00	Fowls, pair... 0 50 to 0 70
Flour... 0 00 to 4 75	Ducks, brace... 0 50 to 0 70
Rye... 0 70 to 0 72	Geese... 0 00 to 0 00
Beef, hind qrs. 7 50 to 9 00	Turkeys... 1 25 to 1 50
Beef, fore qrs. 6 50 to 7 00	Butter... 0 22 to 0 25
Mutton... 7 50 to 8 00	Butter, dairy... 0 18 to 0 21
Lamb... 9 00 to 10 00	Eggs, fresh... 0 18 to 0 21
Veal... 6 00 to 8 00	Wool, per lb... 0 18 to 0 20
Hogs, per 100 lb 8 00 to 8 25	Hay... 13 00 to 15 00
Potatoes, bag 6 60 to 6 70	Straw... 7 50 to 12 50

GRAIN AND PROVISIONS.

MONTREAL, Oct. 5.—The local grain market was quiet and without any change to-day. Canada white and red winter wheat is quoted at \$1.05; Canada spring wheat is nominal; No. 2 red winter American is quoted at \$1.05. Oats are quoted at 36¢ per bush. Peas unchanged. Barley and rye are nominal. Flour quiet and without change; 125 brls superior extra sold at \$5.50. It is said that superiors sell as low as \$4.80 in bond. Extras are quoted at \$5.20 to \$5.25; 125 brls superior extra at \$5.50; 125 brls medium bakers' at \$5.45; 100 brls fine at \$3.95; 100 brls Pollards at \$3.55. Quotations:—Superior extra, \$5.40 to \$5.50; extra superfine, \$5.20 to \$6; fancy, nominal; spring extra, \$5.25 to \$5.35; superfine, \$4.70 to \$4.80; strong bakers', Canadian, \$6 to \$6.60; do. American, \$7 to 7.50; fine \$3.80 to \$4.00; middlings, \$3.60 to \$3.90; pollards \$3.40 to \$3.60; Ontario bags, medium, \$2.75 to \$2.80; do., spring extra, \$2.70 to \$2.75; do. superfine, \$2.40 to \$2.50; city bags delivered, \$3.45 to \$3.50.

PROVISIONS.

The butter market is showing a little more life. The views of shippers and holders are, however, still considerably apart. A sale of a lot of 75 tubs of creamery is reported at 24¢, and also one of 160 packages of selected townships at 20¢. Two lots of September creamery of 100 tubs each, have been bought at 25¢; 40 tubs of August at 21¢; and a 100 tubs of August at 22¢. We quote with an addition of about two cents as the prices for the jobbing trade. Creamery, fine flavoured extra, 22¢ to 23¢; do. good to fine, 21¢ to 22¢; eastern townships, 18¢ to 20¢; Morrisburg and Brockville, 18¢ to 20¢; Western 15¢ to 16¢. While it is claimed that 11¢ and over is being paid in the country for cheese, the market here shows no alteration, and certainly does not warrant any change. Quotations namely:—August, 10 to 10½; September and October, 11 to 11½. Eggs still command 22½. Hog products are unchanged. Western pork, \$24.25 to \$24.75; Canada short cut, \$25.50; inspected Canada mess, \$25 to \$25.50; thin mess pork, \$22.50 to \$23; hams, city cured, at 15¢ to 15½; do., canvassed, at 15½¢ to 16¢; bacon, 14¢ to 14½; lard in pails, 15¢ to 15½.

DAIRY MARKET.

Liverpool, Oct. 5.—Flour, 12s; spring wheat, 8s 9d; red winter, 8s 4d; white, 9s 2d; club, 9s 6d; corn, 6s 4d; oats, 6s 3d; barley, 6s 6d; peas, 7s 4d; pork, 102s 6d; lard, 63s; bacon, 72s; tallow, 45s.

INGERSOLL CHEESE MARKET.

Ingersoll, Oct. 3rd.—Twenty-six factories offered 11,630 boxes cheese; 7,000 August make, 3,000 September make. Two factories offered September and balance of season's make. No sales. On account of improved price paid at Little Falls and Utica yesterday, holders were firmer in their ideas, offering August make at 11c., and declined to offer September and balance except they could get 12c. or over. Sales of August have been made the past week at 10¢.

THE HOP MARKET.

Utica, N. Y., Oct. 3.—About 3,000 bales have been sold by dealers in this city during the last ten days, at prices ranging from 62 to 65c. cash, and 65 to 68c. time; 65c. is the highest cash sale by dealers that we have heard of. Emmet Wells remarks: "High as our prices seem, we are just 10c. per lb. lower to-day than Germany. If we can keep within this range, England will give us the preference; if not, she will buy from Germany first. German hops laid down in New York would cost to-day 82 to 86c. per lb., the expense of getting them here, including duty, freight and insurance, being about 10c. per lb."

LIVE-STOCK MARKETS.

BRITISH MARKETS, PER CABLE.

Liverpool, Oct. 1, 1882.—Supplies of States cattle have been moderate, and the general demand for cattle good. The demand has not been very brisk, but values have strengthened some during the week.

Prevailing prices are as follows:

Finest steers... 16s	Cents @ lb.
Good steers... 15s	
Medium steers... 14s	
Inferior and bulls... 9@11	
[These prices are for estimated dead weight; offal is not reckoned.]	
The sheep market has been rather strong and prices remain firm as follows:	
Best long woolled... 15@18	Cents @ lb.
Seconds... 13@15	
Merinos... 11@12	
Inferior and rams... 9@10	
[These prices are for estimated dead weight; offal is not reckoned.]	

GLASGOW—PRE CABLE.

Glasgow, Sept. 29, 1882.—The general market has been less active, but values remain without quotable change. Best Canadian cattle are firm. Sheep are dearer, and trade is fairly good.

Present prices for cattle, and sheep (dressed weight sinking the offal) are as follows:

Best Canadian steers... 16 @ 17	Cents @ lb.
Canadian sheep... 17 @ 17	
American sheep... 14 @ 17	

MONTREAL LIVE STOCK.

Sept. 28. About 280 head of shipping cattle were on sale, but the difficulty of obtaining insurance for deck loads, and the limited freight room available prevented any activity in the demand, consequently sales were few and at somewhat lower prices, several small lots changing hands at 50c per lb., live weight. At Viger market the continued heavy receipts of butchers' cattle to-day, about 700 head, have resulted in a material declension in prices, most buyers filling their wants at rates considerably below those current last week. A few head of choice sold at 5c. per lb. live weight, but the cattle obtaining that figure were very carefully selected. Fair to good grades brought from 4 to 4 1/2c. under a fair active demand. Poor and inferior stock were very plentiful and a large proportion were unsold at mid-day, buyers being indifferent about purchasing except at very low rates. Sales were reported as low as \$10 to \$15 per head. Calves were scarce and firm at from \$3 to \$10 per head, although one or two extra choice sold for higher prices. Sheep and lambs were in liberal supply, the offerings numbering over 1,200 head. The general run of quality was very poor. Sheep sold at from \$5 to \$8 each, and lambs at \$2.50 to \$4 as to quality. Fat hogs were in better supply at easier rates, prices ranging from 7 1/2c. to 8c. as to quality.

Eleven shipments of farm cattle, prize stock exhibited at the Provincial Fair by H. & J. Groff, Elmira, Ont., were shipped from here to H. Longworth, Glenwood, Charlottetown, P. E. I.

The latest incident in the Hereford versus Shorthorn competition is a challenge to champions of the latter breed to compete at the next Fat Stock Show in Chicago for \$1,000, half of the prize money to be contributed by each interest.

Henry Stewart says of farmers' clubs: "They are the most useful and effective means available for lifting the farmer into his right and proper position in the world. It is by some such association that all other industrial classes, and even the learned and scientific professions, have been brought into a condition of coherence by which their weight and influence are felt in society, and through which, by the advantages resulting from mutual assistance, each member has gained by the work of every other one."

To get the best seed from cucumbers they should be permitted to remain on the vine until they show signs of decay, when they should be taken off, placed in a pail or box until the fruit has mostly decayed, when the seed should be carefully and thoroughly washed; all pulp, etc., being removed, the seed is then dried and placed in a cool, dry storeroom. The seeds of cucumbers, as well as those of all our garden vegetables, should be all saved from the most perfect and productive specimens, and in order to preserve the variety in all its purity no other sort should be permitted to grow near it.

RAT CUNNING.—Rats are very provident, both for their benefit and the community's. Eggs, which they have been known to carry to the garret to the cellar, and other tempting foods instead of being devoured instantly, are stored away for the hour of need. A writer, in the Quarterly Review cites a noteworthy instance of the far-seeing sagacity of rats. A gentleman who fed his own pointers noticed through a hole in the door that a number of rats ate from the trough with the dogs, which did not attempt to molest them. He resolved to shoot the intruders, so when next he served out the food he kept the dogs away. Not a rat came to taste, although he could occasionally see them peering out of their holes, for "they were too well versed in human nature to venture forth without the protection of their canine guard." When the dogs were let in, the rats joined them, and fed with them as usual. —[Chamber's Journal.

NEW ADVERTISEMENTS.

JOINT SALE OF JERSEY CATTLE

Numbering Twenty-eight Head, THE PROPERTY OF DR. S. N. COOKE, OF PARIS, AND SAMUEL SMOKE OF BLENNHEIM.

THE UNDERSIGNED is favored with instructions from the above gentlemen to sell the above by Public Auction on Market Square, Woodstock,

THURSDAY, OCTOBER 26th.

These cattle are from imported stock, pure Jersey blood, fine milkers and in good condition. Parties desiring to procure this breed of cattle should avail themselves of the opportunity. This is the first sale of Jerseys in this part of Ontario. All will be sold without reserve, as the partnership existing between Dr. Cooke and Mr. Smoke ends with this sale.

The stock will be at the farm of S. G. Burgess, adjoining the Corporation of Woodstock, from Monday, October 23rd, until the day of sale.

Parties wishing to attend the sale can come by the Credit Valley, Great Western Branch of the G. T. R., and the Georgian Bay and Lake Erie Railways.

These cattle are mostly fawn colored with black points, fashionable for exhibition purposes. Some of the cows on ordinary feed have made two pounds of butter per day. Catalogues and any information may be obtained from Dr. Cooke, Paris; S. Smoke, Canning, or of the undersigned at Woodstock.

SALE TO COMMENCE AT ONE O'CLOCK, SHARP. TERMS.—12 months' credit on approved security. Seven per cent. discount for cash. Any cattle sold and not settled for will be resold, the loss, if any, to fall to the defaulter. The decision of the Auctioneer to be final in all cases of dispute. S. G. BURGESS, Auctioneer.

CATALOGUE.

- 1 "Lady Grant," sired by Humboldt: in the books of the American Cattle Club. Dam from imported stock; due to calve on the 6th November, 1882, by Cow Boy.
2 "Maud," dropped December 23rd, 1875, from imported stock; served by Cow Boy Jan. 3rd.
3 "Lady Dufferin," by General Grant; dam, Lady Grant, from imported stock; served by Cow Boy, Jan. 22nd.
4 "Elizabeth," by General Grant; dam Lady Grant; served by Cow Boy July 3rd, 1882.
5 "Maud," by General Grant; dam Rosa Bonheur, dead; served by Prince of St. Lambert, July 31st.
6 "Josephine," got by General Grant; dam Rosa Bonheur; served by Prince, July 30th.
7 "Rosa Lee," by General Grant; dam Maud; served by Prince July 25th.
8 "Lilly Dale," dropped Feb. 6th, 1880; her dam, Josephine, got by Cow Boy, served by Prince of St. Lambert.
9 "Beauty," dropped Feb. 21st, 1880; dam Lady Grant; got by Cow Boy.
10 "Daisy," dropped April 4th, 1880; dam Lady Dufferin; got by Cow Boy.
11 "Star," dropped April 19th, 1880; dam Lady Maud; got by Cow Boy.
12 "Pinkie," dropped Jan. 10th, 1880; dam Lady Jane; got by Cow Boy.
13 "Florence," dropped Jan. 1st, 1881; dam Lady Grant; got by Cow Boy.
14 "Bessie," dropped Feb. 10th, 1881; dam Lady Maud; got by Cow Boy.
15 "Nettie," dropped Feb. 18th, 1881; dam Lady Dufferin; got by Cow Boy.
16 "Bella," dropped March 29th, 1881; dam Rosa Lee; got by Cow Boy.
17 "Fanny Fern," dropped May 1st, 1881; dam Victoria; got by Cow Boy.

The above Heifers have all been served from the 10th of July to the 10th of September, by Prince of St. Lambert.

- 18 "Cow Boy," by St. Lambert, dropped 3rd July, 1878; his dam May-day, 5109. No. 3790 is now registered in the books of the American Jersey Cattle Club, Newport, Rhode Island.
19 "Prince of St. Lambert," No. 5287, calved March 10th, 1880.
20 "Bismarck," dropped Feb. 13th, 1882; his dam, Lady Dufferin; got by Cow Boy.
21 "Rob Roy," calved April 17th, 1882; dam Maud; got by Cow Boy.

Spring Calves.

- 22 "Emma," dropped Nov. 5th, 1881; dam Josephine; got by Cow Boy.
23 "Grace Darling," dropped Dec. 5th, 1881; dam Lady Grant; got by Cow Boy.
24 "Maud S.," dropped Jan. 2nd, 1882; dam Lady Maud; got by Cow Boy.
25 "Mamie," dropped April 4th, 1882; dam Elizabeth; got by Cow Boy.
26 "Fancy Fan," dropped April 9th, 1882; dam Pinkie; got by Chicago; he by Humboldt.
27 "Victoria 2nd," dropped April 20th, 1882; dam Victoria; got by Cow Boy.
28 "May Blossom," dropped May 19th, 1882; dam Rosa Lee; got by Cow Boy.

BERKSHIRES.

OUR HERD OF BERKSHIRES HAVE WON 20 FIRST PRIZES

At the three leading Shows in Canada this year. We won

- 1st and 2nd Sweepstakes for Boar and Two Sows at Toronto;
Silver Medal for Boar and Two Sows at the Provincial Fair, Kingston;
Sweepstakes for best Boar and Two Sows at London.

We have young stock for sale by Imported Boars and out of Imported Sows.

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HAVING lately arrived from England, I now offer for Sale

30 Oxforddown Shearling

Two Shear Ewes, One Shearling Ram and Seven Ram Lambs,

Bred by Mr. Wm. Arkell, of Hatherop, Mr. Hobb's Maisey Hampton and Robt. Hobb's Kelmscott; also twenty Cotswold yearling and ten Shear Ewes, one two year Shear Ram and Three Ram Lambs, bred by Mr. Robt. Jacobs, of Burford, and Mr. Henry Akers, of Black Burton, Oxfordshire, England.

Some of the lots are from the first and second prize pens at the Royal Show. The Oxforddowns were also highly commended at the same Exhibition.

HENRY ARKELL, Arkell P. O., Ont.

CHEESE & BUTTER EXHIBITION

Open to All the World.

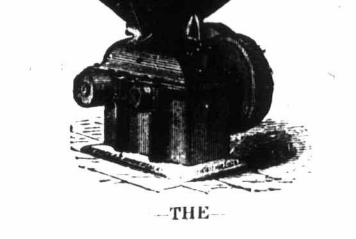
THE ANNUAL CHEESE AND BUTTER EXHIBITION of the Western Dairyman's Association of Ontario will be held at the

TOWN OF WOODSTOCK, COUNTY OF OXFORD,

Wednesday and Thursday, 11th and 12th October next.

When Prizes to the extent of One Thousand Dollars will be awarded. Forms of entry and conditions under which Cheese is to be shown will be forwarded on application to the Secretary at Ingersoll. Entries to be made before the 9th Oct. By Order, C. E. CHADWICK, 202

Ingersoll, Sept. 15, 1882.



NEWELL PATENT UNIVERSAL GRINDER

Canadian Agency, NEWELL & CHAPIN, No. 118 Bonaventure-St., Montreal.

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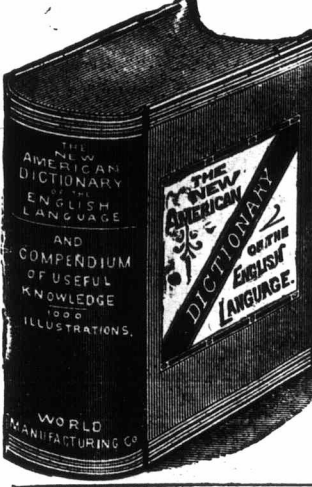
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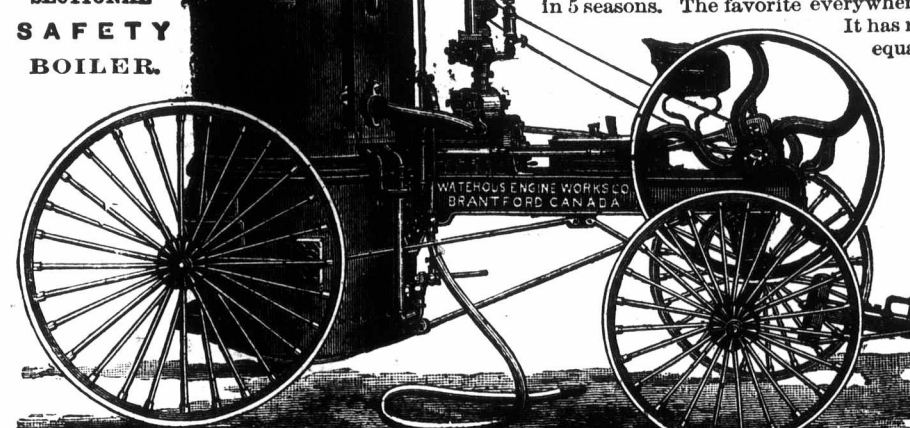
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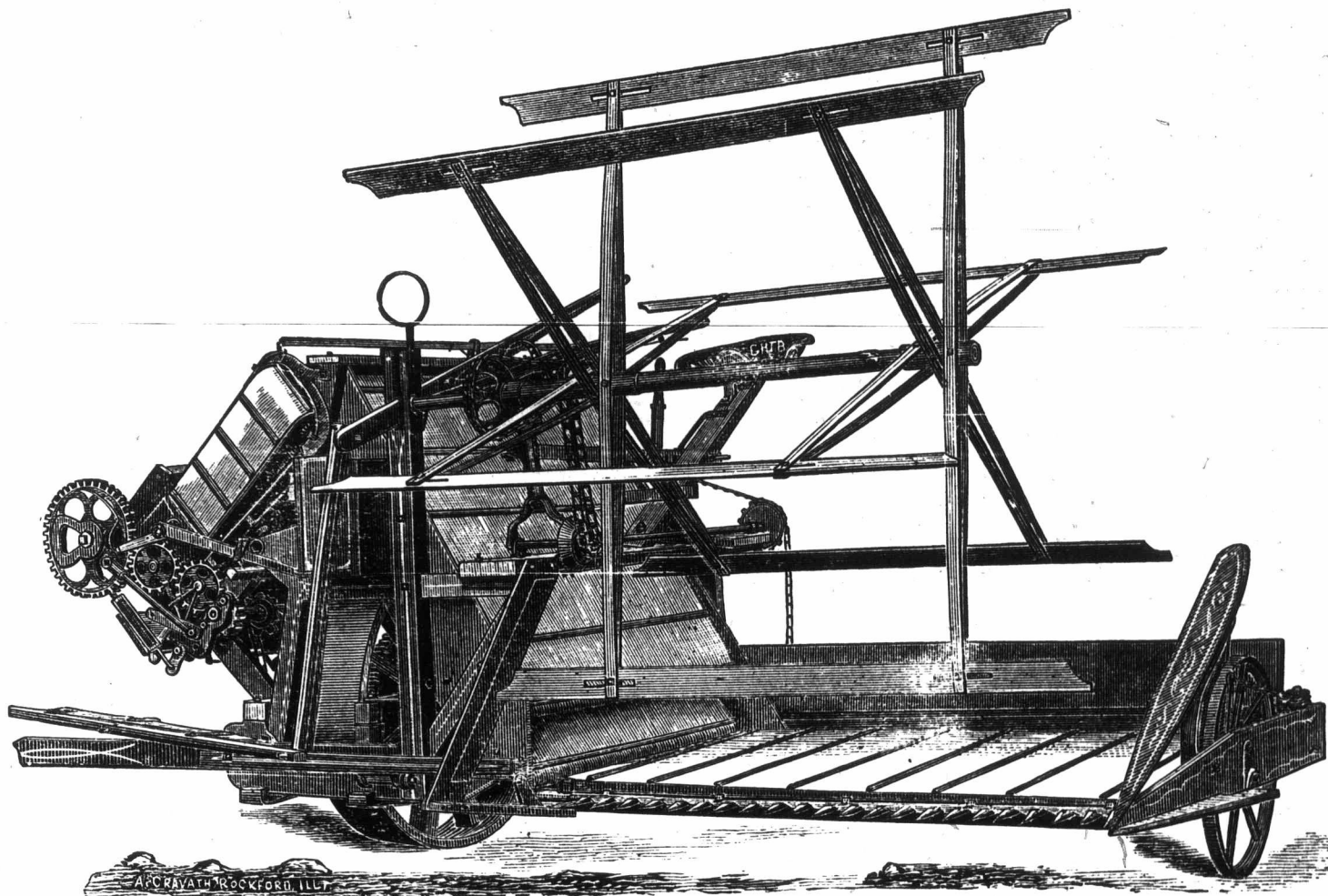
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For Rheumatism, Neuralgia, Spinal Irritation and Weakness, Lumbago, Sprains, Contraction of the Tendons, Ague in the Breast and Face, and all pains situated in any part of the body. The pills are a very valuable and successful remedy for Acute and Chronic Rheumatism, used in connection with the King of Liniments.

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Ontario Agricultural College, Guelph, June 20, 1882.

To the Empire Horse and Cattle Food Co.:

DEAR SIR,—We have made a thorough trial of your "Empire" Food during the last two years, and can with confidence recommend it to those requiring to tone up, top off, appetite, and generally invigorate all kinds of live stock.

Yours, WM. BROWN,
Professor of Agriculture and Farm Supt.

Norwich, May 2nd, 1882.

D. A. Kirk, Druggist:
DEAR SIR,—During the past winter we have used several kinds of horse and cattle foods in feeding our large stock of cattle, such as "Thorley Improved," "Yorkshire," and "Empire," and we unhesitatingly pronounce the "Empire" to be the best, after giving it an impartial trial, and would recommend it to all who keep live stock. One animal that was fed on the "Empire" Food gained 110 lbs. in 28 days, or at the rate of 4 3/4 lbs. per day.

Yours truly,
A. J. STOVER & SONS,
Breeder of Shorthorn Stock.

Manor Farm, Gowan Station, May 1, 1882.

Empire Horse and Cattle Food Co., Mitchell, Ont.:

GENTLEMEN,—Yours of May 1st to hand. I shall be obliged by your sending me 300 lbs. more of your Food to Gowan Station. With regard to this article, having used it both in this country and in England, I think I am justified in giving my opinion on the matter. I think it is quite equal to, and probably better than any other food of the kind. My stockman here is well satisfied with it, and tells me that its use is easily seen in the handling of the animals he feeds it to, and I am sure for myself that it is an article well worth using.

Yours, C. C. BRIDGES,
Shanty Bay P. O., County of Simcoe,
Importer and Breeder of Hereford Cattle, Shropshire Down and Southdown Sheep.

Woodstock, Ont., June 24th, 1882.

To the Empire Horse & Cattle Food Co., Mitchell:

GENTLEMEN,—Speaking about your food, after testing it thoroughly myself and getting opinions from a great many of the principal farmers in this section, I can recommend it very highly. I feel satisfied it is far ahead of any other food that I have seen offered for sale. I have now handled it for nearly two years. At first I thought it advisable to order only 100 lbs. at once, which I did for some time, but now, as you will see by last order a few days ago, I get it by the ton. All you require is to keep the Food up to its present and past standard, and I am sure you won't need to ask people to buy it. It will sell itself.

Yours truly, W. H. MILLMAN.

Stratford, Ont., June 29, 1882.

To the Empire Horse and Cattle Food Co., Mitchell, Ont.:

GENTS,—After giving your Horse and Cattle Food a trial, we have just purchased a further supply, which is the best testimonial we can give as to its merits. I may say that formerly one of our horses, when heavily driven, would sometimes lose its appetite. Now it is always ready for its food. Since using your food our horses have done their work well, and kept in good condition. When in England I visited the Thorley Manufactory, and when visiting yours in Mitchell I could not help noticing the sameness, both as regards smell and appearance of the ingredients used at both places, and have every confidence that your Food is identical in all its essential ingredients with that which has caused Thorley's name to become a household word in England, and has given his celebrated food such a world-wide reputation.

I am, yours truly,
W. E. SHARMAN (Gadsby & Sharman),
Marble Works, Stratford.

Thorold, June 26th, 1882.

Empire Horse and Cattle Food Co., Mitchell, Ont.:

GENTLEMEN,—We have great pleasure in recommending your Horse and Cattle Food to the public. Every one here that has used it speaks very highly of it. The amount of it that we have sold since it was first introduced here, Dec. 5th, 1881 speaks for itself. Our orders will show that we have sold 2,000 pounds. We will send you a number of testimonials from our customers, and hope we will have them in time for your almanac.

Yours truly,
GEARIN BROS.

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D. C. MACDONALD, Secretary and Manager.

STATEMENT—1st January, 1882.

Amount of Available Premium Notes, unassessed balance.....	\$200,190 68
Assessments in course of collection	13,131 95
Agents' Balances secured by Members' Due Bills and Agents' Bonds.....	30,546 46
Bills Receivable.....	409 05
Balance on Mortgages.....	500 00
Office Furniture and Plant.....	648 53
Dominion Deposits for security of members.....	30,000 00
Accrued Interest.....	1,049 32
Cash in Federal Bank.....	10,032 00
" Treasurer's hands.....	696 12
	\$287,204 07

LIABILITIES.

Borrowed Money..... None.
Losses Adjusted, but not due..... \$4,975 30

Assets over Liabilities..... \$282,228 77

This old and well-tried Company does a larger business in Ontario alone than any other Company, Stock or Mutual, English or Canadian, in the whole Dominion, having in the year 1881 issued no fewer than 12,545 Policies, a number never before exceeded, excepting by itself. The year 1881 was a most trying one for Insurance Companies, and this Company had an exceptionally heavy bill of losses, yet according to the Dominion Government returns, it was the only Canadian Company whose income exceeded its expenditure for the year. For insurance apply to any of the Company's Agents throughout the Province, or address the Manager, London, Ont.

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In durability, lightness of draft and perfection of its work, we claim for this Machine that it has no superior among the many implements of the kind now before the people.

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