

FARMER'S ADVOCATE

PERSEVERE & SUCCEED.

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NO. 6

The Farmer's Advocate!

PUBLISHED MONTHLY BY WILLIAM WELD.

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TO SUBSCRIBERS:

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We cannot change the address of a subscriber unless he gives us his former as well as his present address.

Subscribers should always send their subscriptions by registered letter, and give their name and post office address in full. Subscriptions can commence with any month.

Subscribers who do not give express notice to the contrary, are considered as wishing to continue their subscriptions.

TO ADVERTISERS:

Our rates for single insertion are 20c. per line—\$2.40 per inch, space of nonpareil (a line consists on an average of eight words).

Manufacturers and Stock Breeders' cards inserted in "Special List" at \$1 per line per annum.

Condensed farmers' advertisements of agricultural implements, seeds, stock or farms for sale, or farms to let, not to exceed four lines, 50c., prepaid.

Advertising accounts rendered quarterly. Advertisements, to secure insertion and required space, should be in by 20th of each month.

Letters enclosing remittances, &c., only acknowledged when specially requested. Our correspondence is very heavy, and must be abridged as much as possible.

On the Wing.

We find it necessary to leave our office occasionally to gain information and attend to business in connection with your paper. We wish to improve every department as fast as we can. These journeys we shall report to you under the above heading. May 9th, we went to Toronto via G. W. R. The winter wheat along the line looks well; the spring crops are mostly in; the land is in good order. The prospects for a good crop are very encouraging.

In Toronto we made arrangements about artist work, and went to Yorkville to see an eminent horticulturist, who has consented to aid us in the horticultural department of this paper. We paid a visit to the establishment of the Hon. D. McPherson. He has the finest conservatory in Ontario, and nicely kept grounds. While walking through the garden we noticed some very fine

DWARF PEAR TREES,

perfect models of health and beauty, and covered with fruit buds. Adjoining were some poor, miserable looking trees; we inquired the cause, and why such miserable looking things were on the ground. Our informant said the poor ones were on quince stocks, and that many had already died. Our conclusion is to advise our readers to plant no more pear trees grafted on quince stocks; they may bear a year or two earlier, but they will not make a lasting tree; they will die in a few years, and result in disappointment after a few crops. When you plant a tree you should look to the permanent beauty and utility of its character; no amateur or fruit grower likes to dig up dead trees.

In passing along the Davenport Road, we noticed the palatial residences of some of our merchant princes, many of which are constructed and kept up like European mansions. They are situated upon high, elevated land. Two miles north of the

bay a fine view of the city is obtained; the spray of Niagara Falls is visible, and Uncle Sam's territory may be seen while passing along the road westward. We noticed on the hill-side a fine crop of

LUCERNE.

Being so much pleased with it, as it was the finest piece we have yet seen, we went to the house to enquire about it. This was at the residence of Dr. Wood. The Lucerne was sown six years ago; nothing more had been done to it, except to put a little manure on the brow of the hill and to cut it twice a year; it is as good now as when first cut. At this time, May 11, it was ten inches high. The red clover or common grass had scarcely commenced to grow. It requires to be cut early if kept for hay, or the leaves will drop off. No farmer could have seen this without desiring to have a piece to cut for his stock before the other crops are fit.

We called at the office of the

AGRICULTURE AND ARTS ASSOCIATION.

The new secretary was in Chicago attending the Shorthorn sales. Mr. Buckland, the assistant, informed us that they are preparing a register for Cotswold sheep. The Canadian Berkshire Register is becoming patronised by the breeders. Several defects were pointed out to us in the Ayrshire Herd Book published in Montreal. It appears that the Ontario Ayrshire Herd Book will be preferred. We wished to know when the Board would meet, but the time was not positively known. It might be of advantage to the Association and the country if the meetings were made known to those who might have any business to attend to, or require any information in regard to agricultural affairs.

Hearing of a new agricultural enterprise, we directed our course to the

TORONTO REAPER AND MOWER MANUFACTORY.

An American company has purchased a fine property near the Bay, and erected a spacious building for the construction of reapers and mowers. The machine shop is large, airy, and much neater and cleaner than most of our factories. The machinery necessary for the works is the best procurable, and cost sixty thousand dollars. The land and buildings have cost a much greater sum. The firm are practical men, and they claim to have the best machine, and feel satisfied that the farmers of Canada will soon acknowledge it. It would benefit many of our manufacturers and farmers to visit this establishment; they have a finer office and better grounds around it than any we have seen. The implement they are directing attention to this season is Whitely's Toronto Mower. The machine appears to combine all the advantages of the general mowers now in use, but the driving power is different, consisting of two cog wheels in the form of a disc, which are attached to the shaft, so that the power is carried directly to the knife. We cannot describe the

simplicity of this machine. It is claimed to be of lighter draft, to be more durable, to cut where no other machine can. The Company guarantee to satisfy purchasers; any quantity of references are given, showing its superiority and durability. We wish this new company success, and are pleased the Americans should come amongst us and introduce any implement, if superior to our own. It is of great advantage that we should be able to have the best, especially when manufactured in our own country. This implement deserves inspection, and it is our opinion that it will be preferred to many other mowers now in use. If you are intending to purchase a mower this year, and have not given your order, send to the above-named address and you will have a catalogue sent you, giving a much fuller description of the machine than we have space for in this journal.

On our return trip, we met a man that had many

SHEEP WORRIED BY DOGS.

The farmer had not used sheep bells on his flock. We would again call to the mind of our subscribers to put bells on their sheep if they wish to have them protected from dogs; in fact we think no compensation should be given to farmers who neglect the cheap and effectual mode of frightening dogs from their sheep by a bell about the neck of every twentieth sheep they own.

Beef for Export.

The attempt to open a market for Canadian fresh meat in Europe has been a success. The butchers, dealers and graziers of that country threw many obstacles in the way, and endeavored to deprecate its value, and to cause an unfavorable impression in regard to it. Various were the devices used to check the trade, but the prices at which it has been sold have increased, despite the attempt to desecrate it. The great difficulty in obtaining animals large and fat enough, is the only obstacle now in the way of our reaping a rich harvest from our beef. Our aim must be to increase the size of our animals, and feed better. The cost of feeding, shipping, selling and killing a small ox, is about the same as the cost of shipping a large one. To ship a cargo of small or lean stock would result in a loss. The shipping of the largest and best animals is what is found to pay. Our duty is to aim to supply this demand as soon as possible. To do this, we must breed and feed better. No good farmer can go through the markets of our cities and towns and notice the large quantities of poor, small, thin carcasses to be found in the stalls, the farmers' wagons and sleighs, in the fall and winter, without knowing the loss that must be sustained by producing such a lot of bone and hide for such a small quantity of consumable meat. We must endeavor to change this system as soon as possible. There are but very few farmers that have yet raised an ox that has been fit for export to Europe.

We may improve the stock we now have by better feed. We let our cattle degenerate in the winter. An animal should be gaining from its birth until slaughtered. An animal will make more beef and return more profit, if it is kept thriving for 18 months, than if fed as most of our cattle are and kept for years. Breed has a great deal to do with making stock profitable. The Short-horns are now generally admitted to be the most profitable stock for the grazer on rich pastures lands. There are other breeds that have great merits. Short-horns are now to be procured at such prices that any neighborhood can easily command one. We have seen pure bred bull calves sell at \$15 and \$20 each. Should any of our readers in distant localities desire a cheap one, if they were to make their wants known they would probably find a response. Thus, all may improve their stock that desire to do so. Of course, the choicest animals will command higher prices, according to age and merit. There are always some enterprising persons that will aim to have the best. It is a good thing that a strong rivalry exists in the possession of the best Durhams. England, Canada, the United States and Australia may well feel proud of the spirit of emulation that exists in this struggle for supremacy. The enormous prices that the choicest Short-horns have brought have so completely bewildered and astonished the plain farmer, that he can scarcely believe the prices have been really paid. Twenty, thirty and forty thousand dollars for a single animal. Yet such prices may be paid, and profit result from it, under particular circumstances. There are but very few in Canada that can afford to aim at being owner of the best herd. There always will be a demand for the best. Their descendants tend to improve other stock.

Those that have commenced to improve their stock have found the advantage and profit of so doing, and are desiring further improvement. The farmers in Canada are as progressive as any in the world; there may be some more wealthy. There is a vast part of Canada where a pure bred bull has never yet been introduced; they are only very sparsely introduced into the States; even in many parts of England they are only heard of, not seen by the peasantry.

When we were in France we were quite as much astonished to see the small, inferior-looking cattle, as anything we noticed. What farmer there could think of improving stock, in that country, where ten acres is a large farm, and the majority under five. We presume the whole world must eventually look to the English herds as a parent stock for their improvement and meat. Probably that improvement will be taken up by the different Governments, as the peasantry are entirely too poor and have too small farms to afford to import animals. You may depend if there were any better bred animals in the world, Englishmen would have found them out and introduced them long ere this. We would not advise our readers to plunge into the breeding of Short-horns too hurriedly, but when you are sure you can afford to keep a Durham cow get one and not before. Or you might join with your neighbors and purchase a young bull. Then keep your cattle growing from November till May, and you will be able to realize more than double the price for your beef than you now receive.

Canadian beef in England brings 12c. to 18c. English beef brings 25c. per pound. Let us make English beef, or beef as good as they can there. We can do it. Our grass, grain and climate are as suitable. Let us improve our stock, and feed better. We can make quite as good beef as they can in England. Upwards of ten thousand quarters have been shipped weekly from Canada and the States. This will be greatly increased.

The Farmers' Produce Market.

An attempt is to be made to establish a market in this city to facilitate the business between the farmers and the consumers or merchants. The object in view is to establish a produce exchange somewhat similar to the English plan, namely, to have a room where farmers and buyers can meet at a stated time once a week, samples of produce exhibited and sales effected, the produce to be delivered at any time or place agreed upon. This will save the farmers the expense of bringing produce to market and taking it home again when prices do not suit, and save the necessity of standing on the market.

Farmers from any part of the country can bring samples. The best buyers will be in attendance, and telegraphs of the foreign markets will be open. We believe this will be found of advantage to both the buyer and seller, and will be patronized by all well-wishers to our general prosperity.

Should this attempt prove successful, and we believe it will, as many good farmers and business men are desirous of its success and will devote their energies to establish it, other cities and towns in the Dominion will no doubt adopt the same plan. It is to commence operations at once by establishing the

LONDON CHEESE AND BUTTER MARKET.

A large and influential meeting was held in the City Hall on the 19th of May, many prominent dairymen and leading citizens being present. The necessity and advantages of such a market were fully discussed, and a unanimous expression of approval manifested. The desirability of making this the centre of trade was shown from the advantages of the many railroads that centre here and the near facilities for navigation, the great convenience afforded to the ablest of dairymen to attend this market and return on the same day.

It was not the intention of this meeting to interfere in any way with the Dairymen's Conventions of Belleville or Ingersoll, nor with the Cheese Fair to be held at Strathroy, but to make this a main or central market for the transaction of business on an improved plan. Rules and regulations and by-laws were to be prepared.

The following is a list of officers elected:—

President—Mr. John Wheaton.

Vice-President—Mr. W. Field.

Secretary—Mr. Geo. F. Jewell.

Directors—Messrs. A. G. Deadman, Delaware; Jas. Evans, West Nissouri; Henry Wall, Westminster; Samuel Hunt, North-street Factory; Wm. Webb, Springbrook; Jas. Gilmour, Niles-town; W. H. Stevenson, Iona; Jas. Ross, Bothwell; B. Wood, Bryanston Corners; W. M. Kershaw, Botany; W. B. Heath, city; J. S. Pearce, city, and Alderman Jones, Chairman of Market Committee.

A committee was appointed to draft by-laws and submit same to a general meeting to be held in the same place, on Saturday, 26th, at 3 p.m.; and it was resolved that the first cheese fair shall be held in the City Hall on the following Saturday, June 2, at 2 o'clock p. m.

British Farmers Alarmed.

The great reduction in the price of beef is beginning to be thought a serious affair among the land-owners and the tenantry. Most probably a better class of emigrants will come to our country—farmers with capital; we have plenty of room for such. The proprietors of the *Scotchman* (a first-class paper) have sent a reporter to this continent to enquire into the capabilities of this country in supplying beef to Europeans. He will visit Canada. We know well that our capabilities in that way are almost limitless; we could in a few years send annually enough beef to cover the whole of the island with a thick beef-steak.

The Canadian Entomological Society.

But few of our readers are aware of the great work that has been done and is still being done by this Society. The Society is composed of a few educated gentlemen whose ambition is to excel in knowledge and to learn the habits of all our insects. These gentlemen collect them from all parts of our Dominion; they study their habits and ascertain their utility or the injury they inflict; they also ascertain the best means for destroying those that are injurious. No one can imagine the destruction committed by them. In the United States it is estimated that the damage done by them amounts to

TWO HUNDRED MILLION DOLLARS PER ANNUM.

The United States Government has recently made a grant of fifteen thousand dollars for gentlemen to investigate more searchingly into Entomology in that country, with a view to decrease this loss.

We attended the last meeting of our Canadian Society. We found one member busy operating and examining a lot of small insects; another was comparing and examining a large chrysalis; others were discussing various subjects pertaining to this study. The room is a small one, or at least not a quarter large enough for them to keep their cases of insects in view; they are obliged to have them in drawers with glass tops, and draw them out as required for examination; yet this fine collection, consisting of 10,000 specimens, is the largest and best on this continent.

This is the only society that publishes a monthly journal of its researches, called the *Entomologist*. This journal is purely a scientific publication; there is hardly a farmer in Canada who would read a single number of it if it was presented to him, and would only partially understand it if he did read it, although printed in our own language. It has only 300 subscribers, many of whom are in the States and some in foreign countries; most of them contribute any knowledge in regard to insects that their researches can furnish. Some of them watch these insects with magnifying glasses by night and day, from the depositing of the egg one year till it becomes a chrysalis, a grub, a moth, and lays eggs again.

If we wish for any information in this line, we go to the learned and gentlemanly editor of this journal, Mr. W. Saunders; he is always most happy to give information to all. We wished to know the best means to destroy the caterpillars that are so numerous this year; the reply was that the leaves on which insects, and the twigs on which the eggs are found, should have been destroyed in the fall. At the present time we must gather them by hand and destroy them. Secondly, we inquired what were the prospects for cabbages this year; reply—the butterflies that produce the cabbage worm are very numerous this spring.

The cabbage crop will be in great danger of destruction; parasites may destroy some. By placing two shingles in the form of a roof in several places through a patch, many of the worms will be found under the shingles, and may then be destroyed.

From this Society we receive most valuable information about the Hessian fly, the midge, weevil, chinch bug, codling moth, curculio, &c., &c.; it tells us the best means of battling with our enemies.

This Society continually impresses on the public the necessity of preserving our birds.

This highly useful Society receives but \$300 per annum, per subscription to their journal, and \$750 from our Government, and have to publish a monthly paper from that. They labor for our good.

Entomological Society.

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They hold the exalted position of publishing the best Entomological Journal on this continent. They also, at great expense, sent what was admitted to be the best collection of insects to the Centennial Exhibition.

This Society sent their collection to the Centennial Exhibition; our Canadian Commissioners did not place them in a proper part of the Exhibition. They said the space was occupied. The Society had the collection placed where directed. The Centennial Judges never examined it, because they were not placed where it should have been. This has been already stated to our Canadian authorities, and as a sop, or rather as an insult, they have been awarded a paltry silver medal, worth, perhaps, \$1.50 to \$2. Surely there are more than three hundred wealthy gentlemen and farmers that are willing to subscribe \$1 per annum for such a useful publication. If our Government were to undertake such a work, it would cost the country hundred of thousands of dollars, and, most probably, the work would not be half efficiently done.

The Shorthorn Sale.

On the 6th of June, the most select stock of Shorthorns that will be sold this season, on this continent, will be disposed of in the city of London. The best breeders on this continent will be in attendance, and it is expected that one or more of our English breeders will be represented at the sale. Prices will be paid that will astonish the common farmers, but the best farmers know well what they are doing. No common farmer will get an animal, as the whole stock to be sold are choice animals. The railroads will issue tickets at reduced rates. We hope our Canadian farmers will keep many of these fine animals in our Dominion.

Bone Dust.

TALKS WITH SUBSCRIBERS.

An English farmer now farming successfully in Canada has used bone dust with great advantage in both countries, and understanding the mode of crushing as well as its use, is desirous of procuring a water power for the purpose of crushing; would like to meet with a few farmers or one with sufficient capital to aid him; he would invest between £200 and £300 sterling himself. This would prove profitable to those engaged in it, and of great advantage to enterprising farmers in that locality where the machinery would be erected. Granges or farmers' clubs might consider this.

Surplus of Capital.

A Montreal contemporary has under this heading a very suggestive article; nor is the announcement of an over-abundance of capital confined to one great centre of business. The intelligence may at first sight seem doubtful; the news may be pronounced inopportune—quite out of time and place; as much so as the reported discovery of refreshing streams of sparkling cool water beneath the parching sun-rays in July or August, in the great American Desert. We read at the same time, and on the same authority, of manufactories being closed and operatives thrown idle on our streets; of firms of long standing declared insolvent; of railway companies said to be "bankrupt concerns." The unmistakable signs of commercial activity have ceased to be familiar to us, and even among our farmers—the producers of our national wealth—there is heard the one complaint of want of money. Yet the testimony that there is a plethora of capital is not to be gainsayed. Never, we believe, was there a greater supply of capital in Canada than at the present time. The number of banks—of town and deposit institutions—have gone on increasing in number, and all doing a prosperous business. In one town we find ten

such societies, in another six, and so on throughout the country. We can entertain no doubt of the correctness of the statement: "The amount of capital at the disposal of banks is so large that it is not likely outside influences will cause any very serious hardening of rates, nor are there any indications of any local developments calculated to injure the value of money. We question very much whether at any period in the commercial history of this country the amount of capital available for legitimate trade purposes was so large or so easily procured as at present."

How are we to reconcile these two aspects of the business affairs of the country—the banking institutions having an accumulated capital available for legitimate trade purposes greater than at any period in her commercial history, while, meantime, the trade of the country, business in all its branches, that might, it is believed, pay fair dividends for investment, are no longer profitable—nay, have, many of them, been carried on at a dead loss, and some of them have ceased to exist? There is a plethora of capital in Canada—a country where industry languishes, where trade declines. And there is wealth at least equal to that generally called capital; there is the raw material from which the wealth of nations is produced, and there is skilled labor to convert the material into commodities that would enrich the country and make the country what it might and should be—a land of active industry. Every class of society feels the pressure of the hard times; the capitalist, though on him the pressure may be lightest, must feel as well as others that accumulated money in a country does not imply that country's wealth. Money has been accumulating in the bank vaults, and owing to the severe depression of trade, there has been the greatest difficulty to find profitable employment for it.

Emigrants and Immigrants.

Men are becoming more restless than ever. They are seeking new homes, some of them in the provinces of the North-West, some in Algoma, but many are seeking employment in the United States, transferring to the Republic the wealth of brave hearts and strong arms. Every such emigration from our Dominion is a great loss to the country, and yet it goes on incessantly. Every mail brings reports of individuals and families crossing the border to get that employment which Canada refuses them. A Nova Scotia paper, the *Annapolis Journal*, says:—"Last week we met on the train a family consisting of husband and wife, two blooming daughters, and two sons, lads of fourteen and twelve years, hieing away from their country to spend the rest of their lives in the 'American Union.' They were leaving Nova Scotia, the head of the family said, because he could not get employment here at his trade. The writer, after estimating the loss to the province by the emigration of this one family, adds:—"We have seen whole farms abandoned on some of our mountain ranges, the buildings tumbling down, and fields that were once fruitful turned out to common, and when we have asked, 'Where is the owner of that farm?' we have got an answer something like this: 'He's gone to the States; his son went there and settled,' or 'a daughter went there and married, and sent for the old folks, and they have gone.' Thus is our country being robbed of its bone, and muscle, and brain, and thus is another people being enriched by the valuable acquisition of our best blood. It is admitted that Nova Scotians are among the best artisans in the Union. They are found in her ship-yards bearing the appellation of 'Boss.' We find them in her machine

'shops; we find them in her factories, 'Boss' there, too. We have found them, also, in the most responsible of all situations, the printing-house, and scores of typos calling them 'Boss' even there. Who can tell what Nova Scotia has lost—is still losing every day by the emigration of her people? Bleeding thus at every pore, it is a wonder that there is enough vitality left to give us strength to complain."

How is it that the increase in the population of Canada is so much less every decade than that of the United States? To this question, so often asked, we reply that in Canada the course has been to encourage immigration to the country, and, having done this, to rest content—to take no measure to give such encouragement to home industry that there be sufficient employment for our people, Canadians as well as immigrants; and the consequence is, they emigrate to a foreign country. So there has been a constant emigration from Canada to the States, as there has been from Europe to Canada. Let us give a plain illustration:—

A man who had lived for many years in one of the clearings of Western Canada, stood on the shore of one of the great lakes, in a "brown study," to use his own expression. "More than a score of years ago," he said, after a long silence, "I first stood here looking at this great lake. High-water mark is no higher now than it was then, though for all those years that river has been carrying such a vast body of water into it, and other rivers, too, have been feeding it for hundreds and thousands of years." How like this our emigration! Immigrants are continually arriving from every point of the compass. From sunny France, and Iceland, as well as the British Isles, people of many languages and nationalities have sought a home in Canada. Many streams have been incessantly flowing into the country, and still the increase of the population has not been in proportion to the number of immigrants. The great lake had an outlet that effectually prevented its waters rising above the high-water mark of the old time; so emigration from every province of the Dominion is the outlet that is keeping down the number of her population. It is a matter of even greater importance to provide employment for those who would be glad to make a permanent home in Canada, than it is to induce emigrants to come, when in a few months they are away to the States.

To "A Young Orchardist."

Your trees are "hide bound." No doubt our correspondent has known animals "hide bound." This, too, is the name given by gardeners to the disease referred to as affecting trees. The bark cannot expand; it binds the tree firmly in its grasp, and prevents all healthy growth. It originates from the soil, which was not properly cultivated before the planting of the trees. It is not enough to dig a hole as large as the circumference of the tree to be planted. It is necessary that the whole ground be cultivated to a sufficient depth so that as the roots extend horizontally and perpendicularly they meet in "hard pan," and may from every side get the required food. In cases of hide bound trees the disease is usually indicated by gray lichens on the bark—a sure sign of waning vitality. Lichens and fungi feed not on the healthy, but on whatever is hastening to decay and decomposition. As the evil proceeds from the soil, so must the remedy be applied principally to the soil. Feed and cultivate it, and it will supply the tree with proper nutriment; and in such instances it will not be enough to improve the surface of the soil. Meantime, while combating the cause of the disease, we must attend to the disease itself. Wash the tree well and repeatedly with weak lye. This will have a good effect on the "hide binding," besides, it will destroy the eggs of many insects most detrimental to the fruit crop. Linsed oil is recommended instead of lye, as being more effective for the destruction of insects, as well as a remedy for lichens and their cause.

Crop Prospects.

The crop prospects are even brighter than when we reported last month. The early and rapid growth received a salutary check in the latter part of May. The weather turned cold, nearly approaching to a frost; in fact, in some low, damp localities ice was seen, but on high, well drained lands none was observed. The wheat on some farms was gaining too heavy a growth; some farmers had commenced cutting the top blades, to prevent it getting too stout. The few cold days gave it a most beneficial check. It is now probable that we may pass the 10th of June without further frost. The meadows and spring grain have as promising an appearance as we could wish. We have heard of a few localities where the grub and wire-worm are affecting some of the spring crops, but the damage reported is small, and only on a few farms. The apple crop promises to be a very light one in this locality. The trees bore so heavily last year, that blossoms are very sparsely to be found this season.

Caterpillars are more numerous this year; they give a lot of work to the careful fruit-grower. The curculios are not as numerous as last year; therefore, we may expect more plums. The potato bug is on the war path, with an immense army of countless millions, and has taken possession of every potato patch in Ontario. The cultivator must fight him or he will take possession of that crop. Paris green is the pounder for him. There is a wonderful difference in the strength of this poison. Messrs. B. A. Mitchell & Co., of this city, have supplied us with the genuine, unadulterated remedy. They sent out tons of it last year, and it did its work effectually on the patches where it was properly applied; but some farmers did not kill all, and the advance guard of this foe is like an army. We must kill and kill again.

THE MARKETS.

One overreaching farmer came to this city to sell his clover the beginning of this month, and was dreadfully disconcerted because he could only get three-fourths of the price he had been offered for it a few weeks previous. It served him right. Another farmer in this county has a thousand bushels of wheat. He refused two dollars per bushel; he is also on the whine. The fact is that many Americans thought half the prices depend on their supply; but the world is too large. The Americans held their grain at an over-value. Many will lose immense fortunes. One man in this city held 25,000 bushels. The fall of 30 to 40 cents per bushel is a heavy item. The market for everything is good. Nothing has declined as much as wheat; live stock of all kinds has an upward tendency.

Culture of the Turnip Crop.

This number of the *ADVOCATE* comes into the hands of its readers as they are preparing for turnip sowing, so that a few words on the subject are in good season. We have, it is true, treated on turnip culture in a year that is past, and many of our readers, no doubt, are well versed in it, both in theory and in practice, but many are not so, and the enquiries as to the culture of this most valuable crop that we have had from subscribers in sections of the country which are far apart, tell us that many require still to learn something of root-growing.

The soil suited for the growth of turnips may be found in every part of the country; we believe that on every farm there is land that will produce good crops of turnips; that best adapted to them, however, is such as is deep and friable, or can be made so without too great labor. If not rich, it must be made so. Light soils have been called

turnip soils, from their natural adaptability to the turnip; but we have seen good crops of turnips on heavy clay soils, though at a greater expense of labor than on light land. For turnips, any land should be rich as well as deep and friable, and this is one advantage of turnip culture. In order to obtain a good crop the farmer is necessitated to bring his land into good condition. The succeeding crops pay the bill.

Keeping down the weeds, or what is still better, preventing their growth, is an essential point in successful turnip culture. This, for a root crop, is not very hard to accomplish; an additional plowing, some extra cultivating and harrowing are generally sufficient for the purpose. The land having been skim-plowed after the previous crop, to induce the seeds of weeds to germinate, and then plowed deeper late in the fall to kill them, and to expose the soil to the beneficial action of frost, and lying well formed in ridges till the spring crops are sown are the autumn and fall preparations. Then about old May-day (May 12) plow, cultivate and harrow thoroughly. This May-fallowing will kill almost all the weeds, seeds and roots. They cannot endure the parching which is pretty generally experienced in our climate during that month. If a few weeks show that they are not among the killed, a few strokes of the harrow before the drills be opened will kill them.

Manure comes naturally in connection with the destroying of weeds. Not only has the land its own growth of weeds, increased from year to year by the shedding of seeds and propagation from the roots, but it receives a large increase from the manure heap, when proper care has not been used in its composting. To prevent this evil the manure heap should be turned over entirely some weeks before being applied. By this means the seeds that would be brought into your turnip ground with the manure will have their vitality destroyed. For turnips there is no manure better than that of the farm-yard if properly composted. A light additional application of guano has sometimes been found of great benefit, forcing the plants earlier into their second stage, the rough leaf, before the dreaded fly has time to do its work of destruction. Manure is either spread broadcast on the land before drilling, or else spread in the furrows when the drills are formed, and the ridges then split to cover it. Each method has its special advantages. When the manure is applied broadcast the whole of the land is more equally fertilized for the succeeding crop. When spread in the drills the turnip crop gets the greatest benefit.

The seed should be sown immediately after the drills are formed, while the soil is cool and retains its moisture. The benefit of sowing seeds in fresh-turned soil is well known to gardeners. The drills should be about twenty-eight inches apart; less does not allow sufficient space for their cultivation. Let the seed be covered to the depth of an inch and a half. For covering no other implement is equal the roller if the ground be dry. We prefer thick sowing, though it may seem a waste to have to pull out so many plants. Thick sowing aids in forcing a rapid growth, besides, there are apt to be fewer missed places.

Trial of Implements.

If our Board of Agriculture were to expend the same amount of money in getting up a trial of implements, they would do much more good than by expending it in plowing matches; township and county societies and farmers' clubs can get up these matches, and the men and boys can show their skill just as well. The trials of plows at these matches are no guide whatever to the right kind of plow to purchase for general use or profit, as the work done at these matches is never as good for a crop as that done by the commonest plowman with the most ordinary plow.

Competition with the Dairymen.

The extent to which the manufacture of oleomargarine has increased is an instance of great competition the genuine has to stand with the pretended commodity. The American Bureau of Statistics has published a statement showing that the exports of oleomargarine, or butterine, from New York for seven months, ending March 31st, amounted to 3,594,529 pounds, of the value of \$481,747. 2,252,250 pounds were shipped to France, and 991,329 pounds to Great Britain.

Hints to Dairymen, No. 16.

Written for the *Farmers' Advocate*, by J. Seabury.

As the hot weather will now soon be on us, when the dairyman will require to exercise the utmost care in the handling of his milk, a few remarks will not be out of place. Too much importance cannot be attached to the proper cooling of the milk and getting the cowey or animal odor out of it. Unless this is done, a really fine cheese cannot be made. The finest cheese has a sweet, nutty flavor, which is a very essential requisite, and this is something which cannot be retained in the cheese by the best makers unless each and every patron has used every precaution in the cleansing and sweetening of his milk vessels, and given each and every mess of milk the proper care and attention by cooling and deodorizing. A great many have no idea of the susceptibility with which new milk absorbs any impurities, either in the air or in the vessels in which it is contained. The careless and indifferent patron is not only doing himself a great injustice, but is wronging his neighbor and fellow-patron. The patrons of a cheese factory are in reality partners in a branch of business which is for their mutual benefit, and he who disregards the rules and regulations, and does not use the necessary precautions in the care and handling of his milk, should be ejected from that partnership. Hence the importance of every patron taking the utmost care, and endeavoring to do his duty and do all in his power to induce others to do the same.

I dare say many readers of the *FARMER'S ADVOCATE* often say "O, it's all very fine, this continual lecturing the patrons." It may look light in their eyes, but if we could only get the figures showing the actual loss to themselves and to the country every year by the bad and improper care and management of their herds, and also by the neglect and indifference in the care, treatment and management of their milk, cheese and butter, they would startle any one. If the dairymen could only take the place of the dealers and shippers for a few weeks, visiting the factories and seeing the quantities of cheese and butter that are far from first quality and which come from no other cause than the improper treatment of the milk by the patrons, or at least some of them; if they could, and, in fact, a great many of them might take such a trip, they would come home satisfied that we have good reason for saying so much and for bringing it again and again before them.

A writer in one of the public prints a few weeks ago, in speaking of the "Hog in Connection with the Cheese Factory," attempts to throw all the blame of bad cheese on the uncleanness of the cheese maker and the poor hog and his surroundings at the factory. There may be some blame attached to them, but I would be very sorry to start with that as the chief cause for poor cheese. There certainly is room for improvement in the treatment of the hog and his yards at the factory. As he says, and very truthfully, "that fresh milk is a powerful absorbent of odors," he must bear in mind that when the milk is being drawn from the cow, and when at a temperature of 94° to 98° is the time when it is most susceptible of taking

in any bad odors. For every mess of milk should be cooled down before it starts on its wandering journey to the factory. Milk, when reduced to a temperature of 60° to 70°, can be kept in conjunction with bad odors with much less danger than when at a higher temperature. If the author of this paper would visit the patrons of almost any factory and see how many of them have good, clean, sweet yards or stables for milking in, how many more do their milking in a cleanly manner, how many more use good, clean, sweet, tin pails and cans, and how many more take the least trouble in deodorizing their milk and cooling down to a proper temperature, I think he will come home with the conviction that the fault does not all lay with the cheesemaker, or in the hog and his yard. I have often made the remark, "If cheese could only be made without whey, cheesemaking would then be a very nice thing." I certainly think the question causes the manufacturers more trouble and the patrons are more dissatisfied with its management than with anything else about the cheese factory, and yet it is only worth about one-twentieth part of the cheese.

Another thing he takes exception to is returning the whey in the cans, and that the "nastiest cheese he ever tasted was made in a factory where the whey returned in the cans." I fear there was some other cause than the mere fact of the whey going home in the cans. It is an old saying, "Of two evils, choose the least," and when there is not the proper ground and facilities for keeping hogs, by all means let the whey go home. There has been a good deal of objection raised to sending whey home in the cans, and some makers have gone so far as to require the drawer to have a barrel or hogshead to take the whey back in, with the empty cans standing alongside, and generally catching a share of the whey before getting home. In my opinion this objection is a wrong one, for if the patron does not clean his can with the whey returned in it, there is not much likelihood of his doing so when it comes home empty. A can that has carried milk to the factory and then stood for an hour or more on the drawer's wagon in the hot sun on its way home will be anything but sweet. And of the two, the one holding whey will be much the easiest to clean, and, in fact, to sweeten.

A statement appeared in an agricultural paper not long ago that when a Jersey cow was fed on dried lawn clippings late in January, the butter brightened up in color to a very noticeable degree. This is a very strong proof that lawn clippings, though dry, are a good substitute for green grass. Now, to have your cows keep up the flow of milk right along through the fall into the winter, you must find as near a substitute as possible for green, fresh grass. What shall be the substitute and how prepare it, are questions for every practical dairyman to discuss and study up; for circumstances alter cases, and what suits one man's farm would not exactly suit another. There is no doubt that green grass dried is the nearest and best substitute for green grass, but dairymen must bear in mind that there is a vast difference between green grass dried and ripe grass dried. Too much of the hay that the cow has to masticate and convert into milk is nothing more than ripe grass dried, and much of it very ripe into the bargain. On this the cow is expected to keep up her system and give milk. Is it any wonder that two-thirds of the dairy cows go dry as soon as they are put upon this treatment of food? I am fully convinced that if our dairymen would cut their hay earlier and cure well, and then feed judiciously in the fall and winter, with their cows under proper shelter, we would find them milking very much better, and giving a good, rich milk. The importance and value of early cut hay is becoming more generally known every year, and

very much more importance is being attached to it. In the New York dairy districts hay is now cut twenty days earlier than it was twenty years ago.

There is one little item which the butter makers throughout the country are very careless and indifferent about. Were it an expensive item, or one very hard to be procured, there might be some excuse, but it is not. I refer to the salting of butter. If the makers knew the great objection to coarse salting in England, and the loss which some shippers have to suffer through that little item, salt, I think they would be more careful what salt they used. Procure the best and finest salt that you possibly can get, and see that it is well and finely ground before going on the butter. A great many butter makers have the idea that salt preserves the butter, and hence they think by putting plenty of salt in, their butter will be sure to keep. Now, this is a mistake, as salt is only for a seasoning and to counteract the effect of what little buttermilk may be left in the butter. If everything were all right, and no buttermilk left, butter would keep without any salt by being kept from the air. English consumers of Canadian butter are so accustomed to using a fresh, lightly salted butter that when they come to use our butter, in which you can feel the salt gritting between the teeth, it completely disgusts them with Canadian butter.

An attempt is being made to establish a cheese fair in the city of London. Judging from the feeling expressed by a number of factory men, and the way in which the matter has been taken up by a number of citizens, it must eventually be a success. The railway facilities which London possesses make it one of the best points for holding a fair of this kind in Western Ontario.

The Kitchen Garden.

Written for the Farmers' Advocate, by G. Vair.

The late repeating showers will have made this department put on its summer dress. Attend in time to the proper thinning of early crops, such as carrots, beets, parsnips, &c. Much more profitable and satisfactory will be the result of your labor by proper attention at the proper time, keeping in mind always the old adage, that a stitch in time saves nine, for if allowed to remain too long, a consequent spindling of the plants is the result, and many days elapse before they assume anything like their wonted vigor. When the destructive turnip fly makes its appearance among the Brainea (cabbage) tribe, especially the newly planted ones, apply soot, wood-ashes, or slacked lime, but what I have found most effectual for their extermination is the sweepings and refuse from the tobacco factory, scattered over and around the plants. (Mr. Beetle doesn't like his 'bacca.) Now is the time to sow cucumber and the Chinese Gherkin for pickling. Blood beets may still be sown where they are not wanted to grow large; they grow too large for culinary purposes if put in early. Cauliflower for late crop may be sown to the 10th of June. Now is the time to prick out celery from the seed boxes. Put up a few rough boards, forming a square in a partially shaded place; put to the depth if four to six inches of free, rich soil, and transplant out two or three inches apart each way. Water well; indeed, never at any time allow the plants to suffer for want of water. As neatness is a desideratum, means should be adopted at once to keep the weeds down, which will be beginning to make themselves unpleasantly visible.

FRUIT DEPARTMENT.

Pears.—The prospect for a large return of this most delicious fruit is now apparent. The pear slug, so called, will soon be putting in an appearance, and if left to prey upon the foliage any length of time the tree will ultimately be ruined.

I have found dry slacked lime a most effectual cure for these pests, or if lime is not at hand just when wanted, a few handfuls of fine sand or dust thrown with some force on the upper surface of the leaves is very effectual. The dry particles adhering closely to the glutinous-like back of the insect, his locomotion is impeded, and he rolls off to the ground.

Gooseberries.—Although not quite so much at home in Canada as in all parts of the British Isles, yet, notwithstanding, there is quite a number of varieties that succeed very well indeed, if they get the proper soil, which ought to be of a very dry and clayey nature, with mulching in extreme dry weather. Among the best varieties that I have found for this climate, and not apt to mildew, are, 1st, Whitesmith, an old favorite kind; 2nd, Ploughboy; 3rd, Signora; 4th, Cheshire Lass and Lion. Just about this time they will most likely be attacked by the caterpillar; if so, go to the nearest druggist and procure a few ounces of Heleboro (Heleborus Nigro), put it into a common pepper box, and dust the bushes over in the morning or late at night. Some advise mixing the heleboro with water, 1½ oz. to a gallon. For my part I have for many years used it most successfully in a dry state. The same application will do for the red and white currants. The hotter the day the heleboro is put on, the more effectual will be the result as it seems to volatilize in the sun's rays; hence, the complete annihilation of the pests.

Plum.—I have just a few hints to throw out about this fine fruit:—Facing the east and sheltered from the afternoon sun from two o'clock by a high barn, at Chestnut Park, are two fine plum trees, a Lombard and a Imperial Gage, that have been bearing large crops of fine fruit for a number of years, unattacked by the curculio or black knot. The ground is kept constantly covered with hard coal ashes from the green-house furnaces; an additional coating of ashes is put on every year for the purpose of letting azaleas, camellias and indoor plants open in summer. About 30 yards distant, a very promising plum tree (the Orleans variety) stands, although promising an abundant crop each year for years past, scarcely a plum ever reaches perfection. I attribute the successful fruiting of the two former varieties to the coating of ashes on the ground. If any of your numerous readers, Mr. Editor, have noted any similar facts, it would be gratifying to hear from them. I may have something more to add on the subject upon a future occasion.

FLOWER GARDEN.

It is very gratifying to notice the growing taste throughout our cities and suburban residences for flowers. It is also gratifying to note that amongst many of our farmers, the taste is increasing; yet, I confess, they are very far behind the times and what they ought to be. Such growing taste is the best indication of a higher civilization, refined ideas, a deeper morality; and a word to those that have, Give of your abundance a few roots now and again, thereby influencing your neighbor, him or her, as the immortal Cowper says:—

"To pursue the arts without a crime,
That leaves no stain upon the wing of time."

Potato Bug Machine.

To W. H. Blenheim.

We do not know where the machines are made; have written to enquire; will let you know as soon we can find out. Mr. Lapierre, the farmer that used one last summer, said that it was cheaper and better than using Paris green. He said he took off two bushels of bugs from one acre, going over the ground twice, about two weeks apart. The machine runs along like a wheelbarrow and gathers the bugs into tin boxes. We believe he said the price was \$5.

Correspondence.

The Ontario School of Agriculture.

SIR,—I notice some strictures on the above-named Institution in the last number of the ADVOCATE. Being a recent graduate of the School, with your kind permission, Mr. Editor, I take the liberty of saying a few words on the subject.

Although the Institution is not yet the acme of perfection, as some seem to think it should be, yet I venture to say that the best of our farmers can learn something, and our ordinary ones much, from the *modus operandi* there carried on—"political shuttlecocks" to the contrary notwithstanding. As regards the expenditure, at which many grumble, I much doubt if there is more rigorous economy observed at any public institution in the country than at the Model Farm. This is especially true in regard to the current expense. The expenditure on permanent improvements is absolutely necessary, and should in time prove a good investment, even for the cautious farmers of Ontario.

The money yearly granted to the Farm by the Legislature is large, yet small when compared with the immense sums voted to other objects too numerous to mention and not always worthy. Taxes may be heavy and retrenchment demanded somewhere, but it is surely short-sighted policy to refuse to foster an institution which aims to benefit the most important interest and business in the country, viz.: the agricultural. It is much to be feared that many condemn without duly sifting the evidence (which can be easily got), and without properly considering the facts of the matter.

However, there is no doubt that more careful inspection is needed; and this should be looked into by the farmers themselves, who at present neither scrutinize nor patronize the concern enough for their own best interests and that of the Farm. Before closing, I may say that there ought to be a change in one of the staff, and for the good of the whole community it should be so.

I now close, though much more might be said.
D. MCK. MCK.
Inverness, Lakeside, P. Q.

May 9, '77.

The Royce Reaper.

I am pestered with agents. I want a reaping machine, and everyone claims to have the best. I am inclined to try a Royce Harvester. Have you ever seen it at work? and what is your opinion about it? A reply would oblige.

READER, Brucefield.

[We have not seen the Royce Harvester at work, but are very favorably impressed with its appearance. The lightness, simplicity of its works, and the price, are much in its favor. Some manufacturers of other machines say they will not last as long as heavier machines, nor work so well in heavy grain, but those that have tried them appear satisfied with them. Messrs. Haggert Bros. of Brampton are among our first-class implement makers, and have 140 men employed at the present time in making the Royce Reaper only. There are two other firms manufacturing them; imitations of this machine are also made. We should have no hesitation in purchasing one; and we believe there will be more of these machines sold this season in Ontario than any other kind.—Ed.]

The Best Kind of Posts.

Seeing the enquiry of F. M. E., of Porter Hill, about building wire fences, and having built and used one of about the same make as he enquires about, and finding it to be so economical, neat and efficient, after ten years' trial, I can recommend it as answering the full purpose of any fence.

Being in a straight line (as all fences should be) and taking up little room, it is easily kept clear of foul growth, does not obstruct a landscape view, is a sure preventive against snow-drifts, will be more durable than wood, and can be built cheaper; all these advantages going to make it a very desirable fence if only constructed well. The principal failure in a wire fence is in the slackening of the wires; this is not the fault of the fence, but of the builder, and is easily remedied. I always keep the strands tight on my fence, and I notice that it elicits a good deal of enquiry as to how I do it, so I will attempt to describe it here.

I had common-sized fence-posts slit in two, using half-sized ones, two to the rod, and large,

solid posts at the end, set very firm and deep, and well braced back to the next one; a bottom board 8 by 1½ inches, and top rail 2 by 4 (but 3 by 4 would be better), and be sure to have it end up against the end posts to help to brace them; then fill in between these five strands No. 7 galvanized wire, gauging from the bottom board, the first space 4 in., the second 5, third and fourth 6, and fifth and sixth 7 in., the wires being secured by staples driven into the posts just enough to allow the wire to be drawn through in tightening them. The end posts may be 20 to 45 and 60 rods apart; be sure to plant them very firm, then bore holes at the proper gauge for each wire, those at one end drawn through and looped, putting in a little iron pin and draw it up to the post; for the other end get a blacksmith to prepare five rollers of about inch iron six inches long, square down one end so as to put a crank on (one from the grindstone or fanning mill will answer the purpose), and near the centre have two quarter-inch holes drilled through an inch apart; a strand is run through the post and one hole of the roller, the crank put on and the wire stretched, and when sufficiently tight the waste is cut off and the end inserted into the second hole of the roller and secured by a nail or iron pin, which keeps it from untwisting; and so with each strand till the fence is complete. To keep the wires always tight, apply the crank once or twice a year to draw them up if needed, but after a year or so it is seldom necessary.

As for cost, I find it the cheapest fence I can build. The No. 9 common wire is now five cents per pound; and as it takes just one pound to the rod, so the five strands cost 25c, or eight strands would cost 40c. But I prefer a larger wire, say No. 8 or 7, and I believe that by using a larger number of strands I can dispense with the top and bottom boards. In that case, a post every two rods would be enough, with a small slat every six or eight feet to staple the wires to.

I am now trying another plan, which, if it works well, will give a fence that will last a hundred years. I have planted a nice, straight row of elm trees twelve feet apart, two feet inside my wire fence, and intend, when the posts of this fence fail, to transfer the wires to these trees and staple them on as before; then once in a year or two draw out the staples a little and not let them grow into the tree or become fast to it, so that the wire can slide in the staple as the tree sways; using heavy end posts as before. So I believe one may have a fence of live posts and iron strands to last forever, as far as the builder of it is concerned, and be rather an ornament to my premises.

H. IVES, Batavia, N. Y.

[We thank our N. Y. correspondent for his reply. The plan of planting a row of trees to nail the wires to is one that commends itself to everyone. We feel safe in advising our readers to make a note of this, and to put it in practice. A row of young saplings can be easily procured from the woodland near by; poplar is of very rapid growth and is raised from cuttings, or can be procured at very little cost from nurserymen. There are many other trees more ornamental and more useful, but would cost more and are of slower growth. We might mention the sweet chestnut as a suitable tree, which makes a very handsome ornament, a good shade, useful wood, and produces a good fruit. The time is coming when some of our farmers will make money from nuts; why not begin at once—fruit, fence, shade and ornament?—Ed.]

The Timber of British Columbia.

In writing on the above subject it is necessary to explain that this is no scientific letter, but one written by a farmer to guide (as far as the writer's ability goes) those who wish for information on this country. This letter will contain nothing more than any person living here can see, and I distinctly wish to state that all that is written by me is from my own personal observation.

The first of all is the Douglas Fir or Oregon Pine, which grows to a height of 150 to 200 feet, is often eight feet through at the stump, and carrying its thickness well up. The wood is hard and chips badly; the greater part of the trees split tough, although a few here and there split freely. Ten-foot rails are worth 2c each at the stump; fir cordwood is \$3 a cord delivered on the river bank, or \$1.25 at the stump. Fir rails make a better fence than cedar. The land upon which these fir grows is also covered with underbrush, and is the poorest and driest we have; consequently bush fires are very frequent, which accounts for the small quantity of vegetable matter contained in

the soil. The trees that fall down rot so slowly that the cultivation of these lands is very expensive. I have seen trees which must have been down twenty years, and were as sound as the day they fell. It is not known how long it takes a fir stump to rot, for a number of them around New Westminster, cut in 1862, are still sound, and seem likely to remain so for years to come. Sawed fir lumber is from \$12.50 to \$15 per thousand at the mills. There is a kind of fir which grows in swamps, and to distinguish it from the Douglass Red Fir it is called Black Fir. This kind of timber is scarce and rarely over eighteen inches through. It is hard and will not rot in water.

The Cedar (*Thuja Gigantea*) is certainly the most useful kind of timber the farmers have here. It grows to a great size, for I have seen some twelve feet through. It is very plentiful, and on this account is generally used for house timbers and fences. It is very easily split, and a man can get out about 150 12-foot rails in a day. Cedar shingles are worth \$2.50 to \$3 per thousand delivered, and rails 1½c each at the stump.

There is but little Oak growing, and that only in some parts of Vancouver Island.

The Spruce grows principally in swamps and on the banks of rivers. Some of it splits very well, but it is not much used as it is more liable to rot than fir or cedar. A spruce stump takes about six or eight years to rot. The average size of spruce is three feet through.

Hemlock grows on fir lands, and makes very good piles for salt water, as the worms do not readily attack it if the bark is left on. It is softer than Canadian hemlock; the average size is two feet through. No hemlock and but very little spruce is sawed into lumber, and there is no sale for the bark. Barrels are made of red fir and butter kegs of spruce.

The Willow or Poplar is soft and too brittle for basket work. There is a large tree growing on the banks of the Fraser called Cottonwood, but I think it is a kind of willow.

There is a sort of Balsam, but the growth is limited. The trees are sometimes four feet through; the wood is soft, splits easily, and is used for rails.

Maple is plentiful. The wood is not so hard as the Canadian variety. Carts and other agricultural implements are made from it. No doubt, if greater means of intercommunication existed between here and Ontario, we should import all our agricultural implements from there. No maple sugar is made here, owing to the mildness of our winters.

We have White Pine in small quantities, and the wood is similar to that of the Canadian variety. This lumber is worth \$25 per thousand at the mills.

The Alder grows on low laying lands, and is on an average one foot through. Valuable for firewood, charcoal and furniture. This kind of firewood is often \$4 per cord delivered. The alders grow very thickly; sometimes as many as one hundred trees are found on an acre of ground. The stumps rot out in four years, and these alder bottoms are our very best agricultural lands. It is necessary to mention that very little cultivation can be done on them until the stumps rot.

Birch is not plentiful in the lower country; the bark is not so tough or the wood so hard as the Canadian.

Beach and Hickory do not grow here at all.

That finishes the trees; and all the common sorts a farmer is likely to notice are mentioned, I think. Now the underbrush, and first is

The Crab Apple, and very plentiful it is. It is never more than one foot through, and very rarely that. We use it for many purposes where hardwood is required; as axe-handles, mauls, spokes of wheels, etc.

The Vine Maple grows in great abundance, and is not often as large as the crab apple. It makes good axe-handles, as it is tough and springy.

We have also lots of berry bushes, such as Red and Blue Huckleberries, Wild Raspberries, Wild Gooseberries, Wild Black Currants, Salmonberries, Blackberries (two kinds), Wild Plums, Sall-lal-berries, and a lot more I cannot remember. I almost forgot the Wild Cherry, which grows on a tree the same size as the Alder. There are Bearberries and Dogwood.

The thermometer stands at 50° in the shade most days, and 10 lower at night. Beautiful winter; everything is lovely, and hay \$25 a ton!

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April 2,

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The farmers will have lots to sell if it goes on like this. The cattle get quite a lot of feed out now, and so require less than usual.

I must conclude, with best wishes, &c.

VERITAS.

April 2, '77.

Canada Thistles.

SIR,—It has been said by some one that "he who caused two blades of grass to grow where only one grew before is a public benefactor." Now I notice that a good many farmers, who no doubt would lay claim to having performed this public service, do another act which will overbalance the benefit a hundred-fold, namely, allow a hundred Canada thistles to grow where only one, or perhaps none, grew before, and I am sorry to say that few in this part of the country are entirely innocent of this charge. The increase of thistles is really alarming, and the question, "What is to be done with them?" very important. Some townships are appointing inspectors to try and enforce the law. But really there is no law that can be framed that will do much to mitigate the evil, because of the difficulty in working it. They are growing and going to seed in very rough places, in the woods, in brush heaps, among logs and out of the way places, where few ever see them; and the time it would take to effectually attend to them in the very busiest season of the year is another great difficulty. Still, good farmers do not appear to be very much discouraged; there is still great faith in the future prosperity of Western Canada. The price of land is an evidence of this. If the thistles drive out one class of men, another will take their place, that will drive the thistles. What is wanted is better farming, and the time is coming when the thistles will compel it.

I have recently bought a farm of 100 acres for my son, that has been on the *rent* for a good many years, and is proverbial for its stock of thistles. There are about 80 acres cleared; 45 were under crop last year, and yielded more thistles, I suppose, than anything else. A good deal of draining has been done, mostly with lumber, and done so badly that we will require to take the most of it up and put in tile. As I will have a voice in the management for one year at least, I purpose (if I can spare the time) in future papers to let your readers know how we succeed in tile draining and killing the thistles on this rough farm. We plowed 15 acres last fall, which we intend to put in corn, turnips and potatoes, and so thoroughly work as to kill the thistles. The other 30 acres we shall summer fallow, growing no grain except corn. As yet very little has been done except

BLASTING SOME BIG STONES

that were sticking fast in the fields. This is not so difficult a matter as many think. A hole six inches deep, with one cent's worth of blasting powder, will generally be sufficient to break in several pieces quite a large rock, and render it possible of removal, and when so broken, become useful for building purposes. Some are of such a quality that it pays better to bury them, especially if the ground is not very hard to dig. We had one so large that two shots of powder blew out (although well packed in a hole 10 inches deep) without breaking the stone. I went to town and got some dynamite, put in a charge, filled the hole with sand, and packed it *very lightly* (I am told there is danger in striking it hard). This did tremendous execution, shattering the rock in all directions. I therefore think dynamite preferable for very large stones, but if they can be managed if broken in two or three pieces, powder is much the cheapest. But by some means farmers should remove those unsightly boulders from their fields, instead of going over them year after year with their implements.

We intend to plant the corn 4 ft. each way, and cultivate both ways; our object is more to kill the thistles than to raise a crop. The summer fallow will be plowed about the end of May or first of June.

Innerkip, May 8th, 1877.

Muskoka and its Free Grant Lands.

Sir,—Through the insertion of my letters on this subject in the *Advocate* I have received very many enquiries from persons seeking further information about this district. Several writing from the County of Grey, particularly, ask if we are troubled with summer frosts here? from which I infer that farmers in that section of the country suffer from this drawback; others too, ask if we

have any rock and stone in Muskoka. In reply, I would say that we are not troubled with summer frosts, but we have also in addition to much good land, both rock and stone in certain localities. I would further state for the information of lumbermen and speculators that although there is still a considerable quantity of pine on the Free Grant Lands there is little more than will eventually be required for local purposes. We therefore wish as far as possible to discourage the wholesale shipment of the pine from the district, and prefer to welcome amongst us such men as wish to make a home for themselves here, who will be engaged either in farming or in the prosecution of other local enterprise in our midst, in preference to the alien lumberman who strips the land of its choicest timber and then seeks "fresh fields and pastures new" in which to ply his nomadic avocation. I shall at all times be pleased to answer the enquiries of persons who may address me, providing they enclose a stamp for reply.

JAS. ASPDIN, Aspden, Muskoka.

SIR,—Would you be kind enough to inform me through the *Advocate* which is the best written work on Canadian fruit and Canadian fruit culture, &c.; and also if buckwheat sown about the middle of July would be fit and would do to plow in as green manure after harvest.

W. W. Bensfort, Ont.

[There is no such work published that we are aware of. E. P. Roe, of Cornwall, on the Hudson, Orange county, N. Y., publishes a useful manual on the culture of small fruits. It is well adapted for our information. A. M. Purdy, of Rochester, publishes the *Fruit Recorder*, which is also very useful.

Buckwheat will make a growth if sown by the middle of July and there is moisture enough in the land to enable it to grow. Many prefer sowing at that season; it will do for feed or to plow under. I should prefer the rape to buckwheat.

I have just shipped to Mr. Geo. Henry, of Halifax, N. S., the Shorthorn heifer "Princess Josephine 4th."

I have received from Wishaw, Scotland, a trio of Scotch Grey fowls. I think they are the first that have been imported into Canada. They are very much like the Plymouth Rocks, except that the head and neck are smaller and finer, and the legs are not yellow as are those of the Plymouth Rocks.

JOHN S. ARMSTRONG, Guelph.

Garden, Orchard and Forest.

Flowers—Perennials.

Bright as are the varied hues, and sweet the perfumes of many of the annuals of our flower garden, they can never displace some perennials from their place among our favourites. Of those choice flowers that do not bloom and die in one season, we would say a few words. And first from the *Field*, England, we reproduce the Carnation and Pink:—

Since herbaceous plants began to be popular again, these fine old favorites have received a good deal more attention. The wonder is that they should ever have been neglected as a garden flower, for they have been, and always will be, favourites. We can remember having to propagate them by the thousand annually for the beds and borders of a large flower garden; but when the bedding mania supervened, the fine stock was utterly neglected and lost for the time being, along with many other old and popular subjects. Though the fact is hardly credible now, the same thing occurred in many a garden at the time we speak of.

The carnation and pink are supposed to be derived from the same species, and both are natives of Great Britain. The species has at least been found growing wild in this country, and the carnation has been cultivated as a garden flower from very early times, being popularly known as the clove gilly flower. Though grown and treated in a special manner by florists and also by gardeners, who bestow much care upon their plants, the carnation is, of course, perfectly hardy, and will thrive and flower for years without much attention. In rich or wet soil, both the carnation and pink are short-lived; but in dry situations—as for example, on a rockery—they will grow and flower profusely for a length of time.

PROPAGATION.—Layering is the plan usually

adopted, and operations for the purpose begin about the beginning of August, or a couple of weeks earlier in cold localities. About that season the plants have done flowering and made their growth, and the layers are made of young shoots. The first and preliminary step is to prepare a compost, which should consist of clear river sand mixed with leaf-mould and loam together. This should be spread round and under the branches of the plants to be layered about four inches thick, and the layers must be pegged down into it, and covered over about an inch deep. In layering the shoots the leaves are removed up to about the third or fourth joint, and the knife is inserted about the fifth joint, and run up to the next one, cutting the shoot about half through. This forms a tongue on the cut side, and which must be severed a little below the joint to which the incision has been carried, and the shoot should then be bent so as to make the cut gape, and in that position pegged securely into the compost. A layered carnation shoot may be described as a cutting half removed from the parent plant; the slitting up to a joint is made with a view to facilitate the rooting process without depriving the cutting of the support of the parent stem in the meantime. In this way the shoots of the old plant are layered all around, and the hillock formed by the compost is afterwards packed between the shoots with smooth, round stones, each about three or four pounds weight, in order to keep the birds from scraping the compost away, which they are sure to do if they can reach it, in hunting for worms, &c.; water-worn stones from the bed of a river are best for the purpose. In a month or five weeks after layering, if the plants have been watered regularly during dry weather, they will be rooted, and they should then be lifted and potted, or planted out in the borders where they are to remain. In most gardens where the stock is propagated annually in this way, the plants are potted in 6-in. pots, and wintered in cold frames, the pots being plunged in ashes to protect them from frost; and in spring they are planted out, the old plants being done away with. Whether potted or planted out in beds after rooting, the best staple for the carnation and pink is a good loam, free from wireworms, and it may be mixed with leaf mould and sand; but they will thrive in common garden soil well enough. When wintered in frames, it is necessary to give the plants plenty of air on all favourable occasions, as the carnation does not thrive in a close atmosphere. Anything like fire heat must of course be avoided; and if frost should come severe, mats or straw should be used for protection.

GENERAL CULTURE.—During the summer the plants should be watered in drouthy weather, and they must be guarded against rabbits and field mice, which are fond of them; but these vermin are most destructive during winter. When the flower stems grow, they should be supported singly with small neat stakes, or two or three stakes may be put round each clump, and the matting run round the whole at once, to keep them from falling upon the ground. Some cultivators go to great trouble in disbudding, trimming, and otherwise manipulating the flowers; but here it is only discussed to give the reader an idea of how to grow the carnation as a border flower, and it is not needful to refer to such practices.

J. S.

Of other perennials, E. E. R., in the *Western Farm Journal*, writes as follows:—

One of the best perennials is phlox. It is perfectly hardy, increases in size every year, if good soil is given it; it forms a round, compact bunch of bloom, and can be had in all shades of red, in the most brilliant tints, and these, when grown with the white varieties, can be made into as showy a bed as any one can possibly desire. A good way to produce a fine effect with this plant is to make a large oval bed, not in front of the house, for it is too showy, but somewhere at one side. Raise the bed a foot or more in the centre, and there set the taller, rowing dark varieties. The catalogues will indicate the height of each variety. Then shade off the bed with the lighter colors, edging it with white. Set the plants about eighteen inches apart, and in August it will become a mass of bloom. I know of no other plant that does so well for massing, or which grows so compactly.

The herbaceous spireas should be grown in clumps, and I prefer to keep them by themselves. I grow two kinds, the white and pink varieties, and there is nothing in the garden so fine for bouquets as these flowers. They have just the airy, feathery grace which makes a vase of flowers for the parlor so charming, and they have the merit of

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combining well with almost all other kinds. They are very hardy, and increase rapidly.

The old-fashioned hollyhock is a showy and rather coarse flower, I admit, but I am always pleased to see it. It makes me think of an honest-hearted, substantial old country friend of mine who knows he lacks refinement and cultivation, but means to do the best he can, and does it, and is therefore entitled to high respect. The hollyhock is far preferable to some of our modern flowers, and I have produced a decidedly pleasing effect with it by planting it in thick clumps, in rich soil. This grown to the height of eight to ten feet, in dense masses, has been very highly praised by some of my fastidious floral friends, who had been half inclined to turn up their noses at it. The double and dwarf varieties are beautiful in masses, or as single specimens for the lawn, but must be kept well staked, or they are likely to be blown over by the winds.

Funk, or day lily, as it is more generally known, is a fine plant for the garden. It blooms quite freely, and its fragrance recommends it to everybody. It will live through our winters without any covering, but I find that it does much better when given a good covering of manure in the fall.

The perennial larkspur is very fine for late flowering. I know of no other herbaceous plant of so rich a blue as this. Its long spikes are something to light up any garden with brilliancy, and very fine effects can be produced by judiciously planting it with other tall growing plants. A bed of cannas, of the light colored kinds interspersed with larkspur, was greatly admired in August and September.

The European Larch—Its Value and Durability.

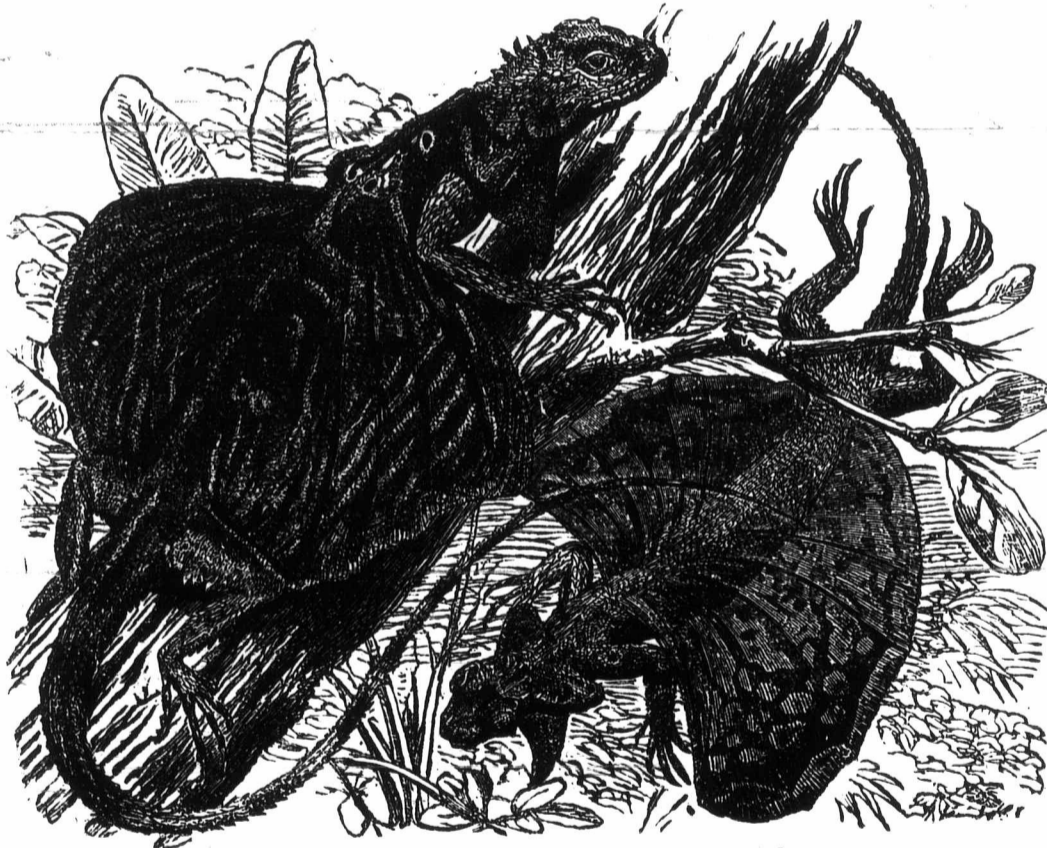
In the *Quarterly Journal of Agriculture*, there is an account of the larch plantations on the estates of Athole and Dunkeld, executed by the late John, Duke of Athole. From which report the following is derived:—

Previous to the accession of the great planter, Duke John, in 1774, two Dukes of Athole had planted larches. In 1738 Duke James planted, at Blair Athole and upon the lawn at Dunkeld on the banks of the Tay, on a rich alluvial sand with open channelly subsoil, sixteen larch plants, the parents of the subsequent and famous crop which was sown on the same property. One of these original Blair Athole larches furnished the timber for the great planter's coffin. The height of the tree was 106 feet. Three of the five Dunkeld lawn trees were also felled, and two of these which were cut down in 1809 contained, at the age of 71 years, 147 cubic feet and 168 cubic feet respectively; and the last mentioned was sold in Leith, to a company of shipbuilders for 3s. per foot, or £25 4s. for the tree. Baltic timber at that time was selling at war prices. The two other original larches on the lawn still stand close to the ancient cathedral of Dunkeld, and not far from a fine group of their own offspring. They are still sound timber at 138 years old, though their period of growth had been reached some years since. The largest tree measures 98 feet 10 inches in height, and 14 feet 6 inches in girth at five feet from the ground. The trunk is perfect in shape, tapering gradually and regularly, until it ceases to be measurable timber at about 20 feet from the top. It is said to contain 423 cubic feet of timber. These two companion trees are eleven yards apart, and their branches meet and interlace without injury.

From this history of two larches, which probably attained their growth at about one hundred years, we learn much in reference to the quantity of timber which may be produced on good, light

land with natural drainage. To continue our general history:—It was by no means easy to obtain larch plants. The sixteen just noticed were brought from London by Mr. Menzies, of Migeny, who presented them to the Duke. Others were obtained by the same Duke James, who planted, in all, 1941. John, Duke of Athole, who succeeded in 1764, obtained about a thousand yearly from the cones of the first planted trees upon the lawn, and added in ten years 11,400 young larches to the growing crop. His successor, John the Planter, soon became a larch lover and an enthusiast, but previous to determining on the general planting of his estate, he felled some of the original larches, aged forty or fifty years old and tested their value. In a short time the Athole frigate, and a small fleet of merchant ships built of larch timber, were afloat, and, to his intense delight he soon discovered that the timber of the new fir from the Tyrol was equal, and in some respects superior, to the ancient pines of Scotland.

The greatest efforts in planting were made during the years 1816 to 1818, when 5,922,000 larches were planted, and from 1824 to 1826, when 4,038,880 were added. The great improver died in 1830, having planted 12,974,380 larches without mixture, and 1,122,339 in mixed plantations.



Fringed Dragon and Flying Dragon.

In this number we call attention to our Entomological Society and its works. We give you the accompanying illustration from the *Scientific American*. The appearance of these gentlemen should tend to make us complain less about the insects and pests with which we are troubled. These animals inhabit the Western Hemisphere, and are numerous.

The flying dragon is the most agile and daring of the winged lizards; and it can leap a distance of thirty paces, its so-called flight being similar to that of a flying squirrel or flying fish. The color of this reptile is variable, but is usually as follows. The upper surface is gray, with a tinge of olive, and daubed or mottled with brown. Several stripes of grayish white are sometimes seen on the wings, which are also ornamented with an angular network of dark blackish brown. When the dragon is at rest or even traversing the branches of trees, the parachutes lie in folds along the sides; but when it prepares to leap from one bough to another, it launches into the air and sails easily, with a slight fluttering of the wings.

It has been commonly supposed that these animals gave rise to the fabled dragons of the ancient mythologies; but the probability is that the real clue to the origin of the monster is to be found in the gigantic saurians of ancient times.

The Way to Cut Flowers.

The florists employ a pair of scissors, with which the stems are severed. But a writer in the *American Garden* says that the flowers should never be pulled off—nor should the stems be severed with scissors, but cut off with a sharp knife. The best time for cutting flowers is immediately after sundown, unless to preserve them from a storm, which would otherwise destroy or prevent their being cut in the evening. On cloudy days the time of cutting is a matter of much less difference. The explanation of these rules, as to the proper time for cutting, is found in the state of the sap at different times of the day and night. From the earliest dawn until sundown, the leaves are actively drawing upon the roots, and the sap is flowing freely. After that time the leaves are nearly dormant until morning. The plant is then resting, is asleep. A flower cut in the sunshine will wilt at once, and if not put into water, will quickly perish, whereas, if cut at sunset, it will remain fresh all night. In a cool place it will not appear to change for a long time, even if not put in water; yet, in a close, hot room it will fade in an hour. The usual manner is to cut all flowers with a long stem. Unnatural as it may seem, the true way (for the greater part of our flowers) is to remove them without a stem. Roses should be cut with a long stem—the longer

the better, provided other buds are not destroyed. The carnation and all plants that bear their flowers in clusters should be removed without stems. The heliotrope should be allowed a very short stem, and the verbena should only be cut as far down as the first leaf. A bit of wire or a match-stick will serve for a stem if it is desired to make of these stemless flowers a bouquet. If they are to be placed in shallow dishes—the best way to display them—the stems are of no consequence. Do not collect flowers in large bundles, or tie them together, as these processes also hasten decay.—*New York Herald.*

Poison Ivy.

Strange advice sometimes appears in our exchanges in regard to poisonous plants, and especially about "poison ivy". If what is called poison ivy (which, by the way, is not an ivy, but a species of sumac) was the only plant growing wild likely to poison

a person by contact, we might excuse some of the mistakes made by writers upon the subject. But the fact is that the so-called "ivy" is the most harmless of the two virulent species found in all our moist woods and low grounds. Even so good an authority as Dr. James C. White writes to a Boston medical journal, advising all "who are unacquainted with the poisons of ivy to avoid any vine or bush growing by rocks, fences and woodsides, and having glossy leaves arranged in threes." Now, this climbing or trailing species of sumac, or poison ivy, is the *Rhus toxicodendron*, and ninety persons out of every hundred can handle it with impunity.

But, growing in similar localities, and frequently side by side with it, there is another species known as poison elder. Poison sumac, or poison dog-wood, is botanically the *Rhus venenata*, which few persons can handle without being poisoned. This virulent species is not, however, "a vine having three leaves," but a shrub growing ten to twenty feet high, with long, pinnate leaves of seven to thirteen ovate entire leaflets. Pinnate leaves are those which have small leaflets on each side of the mid-rib.

Now, when any of our readers are searching for wild plants or fruits, in moist grounds, we would warn them to give this plant a wide berth, if they are at all susceptible to sumac poison.—*Rural New Yorker.*

RE-APPEARANCE OF THE SEVENTEEN-YEAR LOCUSTS IN NEW YORK STATE.—The *Troy Times* says:—The report that this is the year for the re-appearance of locusts is confirmed by a farmer residing in North Greenbush, who says they have already appeared in large numbers in that locality. They come out of the ground in the shape of large grubs, but soon after their wings are developed and they take to flight. They are not destructive to crops, but feed upon trees and shrubbery, in some instances completely removing the foliage from a large tract of country. Although their appearance has only been reported in one locality, there is no doubt they can be found in this section. When full grown they are about an inch and a half in length, and they make a loud humming noise while flying through the air. A singularity regarding their emergence from the earth is, that they all come out backwards. They are called the "seventeen-year locusts" from the fact that they appear only every seventeenth year. In 1860 they were numerous, and this was the first time of their appearance since 1843. In 1826 they were so plentiful that the trees were covered with them, and they could be gathered by the bushel with little trouble.

NEW WAY OF PROPAGATING HYACINTHS.—The gardener of the University of Berlin has found that hyacinths may be propagated by their leaves, thus revealing a new way to raise a large number of specimens of rare varieties. The leaves require to be cut off as close to the bulb as possible, put in a saucer, and covered with a thin layer of sandy leaf-mold. The saucer having been placed in a greenhouse, close to the inner surface of the glass, in eight or nine weeks the leaves will develop buds.

In America three-fifths of the cereals consist of maize. In Europe oats predominate; then come wheat, rye, barley and maize, in the order given. The nations of Europe which produce, relatively speaking, the most wheat, are Spain, Italy, and France; those which furnish the most rye are Finland, Switzerland, and Germany, and those which produce the most barley, the Scandinavian States and Germany. Oats predominate in Ireland, the Scandinavian countries, Hungary and North Germany. Maize takes the first rank in Roumania, Servia, and Portugal.

GRAFTING THE PEAR ON APPLE TREES.—The following curious note on the subject of grafting the pear on old apple trees has been sent by a Mr. Tipton, of Burlington, Kansas, to the *Horticulturist* (New York):—Pears grafted or budded on bearing apple trees is the quickest, surest and cheapest way I ever grew pears. I never picked better pears from standards, or any other under-growth for the pear, than I have picked from old apple trees topped and laddled or grafted with pears; and they always bore early and profusely. In large apple orchards are sometimes found worthless or scraggy trees; on such, I have practiced changing to pears. I never failed in two years to get a good crop. In some trees the pears would die out in six years, while others were healthy to my knowledge for eighteen years, and still doing well the last time I saw them, in 1855, in Franklin County, Ohio.

Cultivate the Young Trees.

Young orchards or trees of any particular value should be as carefully cultivated as the growing crops. Especially is grass detrimental to young orchards.

Trees often die because the moisture is thus all

absorbed from their roots through the neglect of cultivation. A too vigorous growth often delays the time of bearing, but the fruit is always of a much finer quality, and the tree less liable to be attacked by insect depredators. Even forest trees need this care in cultivation, until the roots get hold of the soil, and the branches give sufficient shade to protect the ground from the sun's rays, so that the moisture is never so much diminished as to damage the trees.

These little attentions are often withheld because these beginnings of waving branches and cooling shade are not so much appreciated as when they actually stand upon the border of every doorway. Even when they are bereft of their leaves they temper the Winter's wind and become of greater value on that account. He is certainly a careless man who fails to plant an abundance of trees for their various uses, among the first things done on a homestead, and be sure and give them an abundance of protection and care until they get large enough to care for themselves. No better legacy can be left to future generations to keep the memory green of those having lived before them, than these monuments of ever present delight.

secured 47 7-10 bushels per acre, against 28 1-7 bushels where the phosphate was not used. On two-rowed barley he raised 42 3-8 bushels, against 25 5-6 on land not so manured.

The Turkish paper money, called caime, has depreciated more than one hundred per cent. Bread costs more than it did during the Crimean war.

A law is likely to be passed by the Massachusetts Legislature, establishing a commission of women to inspect prisons and hospitals in that State, in which women are inmates.

A large lion was killed in the mountains between Santa Cruz and Santa Clara, Cal., recently, by two young men named Tompkins and Reed. The beast got in among their horses, on Mr. Mair's ranch, and killed three. The young men chased him all night with their dogs and finally despatched him. He was treed several times during the night. He measured nine feet in length.

The Duke of Sutherland in Scotland, and Dr. Hamm in Austria, have employed dynamite in clearing land, and for digging much deeper than any instrument could. A number of dynamite cartridges are buried at regular distances in the soil, and exploded by electric wires.

A grapevine on W. G. Phelps' premises, Stockton, Cal., measures at a distance of one foot from the ground, twenty-six inches in circumference.

An island was put up at auction in London with no bidders. It was Herm, one of the Channel islands, three miles from Guernsey and Sark, comprising 400 acres, with a good harbor, granite quarries, excellent fishing, an old-fashioned residence, with a chapel and new villa, and no taxes.

A French horticultural society recommends watering geraniums and pelargoniums once a week with a solution of 150 grs. glue in two gallons of water.

PETER HENDERSON, author of *Gardening for Profit* and another work on floriculture, who is withal a practical, reliable man, claims that the reason why the market gardeners, who cultivate tracts on the shores of Communipaw Bay, are able to grow cabbages year after year on the same land, is that it was used for ages by the Indians of New Jersey as

a clam baking ground, filling the soil to the depth of a foot or more with the shells of the bivalves. Club-footed insects, so injurious to cabbages, find the lime in these highly calcareous soils too soluble and corroding for their comfort or subsistence. Shells contain some phosphoric acid which benefits cabbages as it does other crops.

GRAIN TRADE.—The struggle between the Welland Canal and the Erie Canal for the control of grain trade of the Western States has been affected during the season of depression by the rivalry of the railways, which have carried freights at lower rates than ever before. The whole wheat crop of the United States is estimated at 247,482,160 bushels, and the corn crop amounts to 1,062,585,625 bushels. Of this, a very large portion seeks an outlet through the lake cities, Chicago, Milwaukee, Duluth, Toledo, Detroit and Cleveland. Milwaukee as a rule ships more wheat than Chicago, and when the grain comes eastward Montreal handles more of it than Oswego. The largest quantity of grain and flours ever taken down the St. Lawrence in a single year equalled 35,000,000 bushels.



PETUNIA GRANDIFLORA FIMBRIATA, FL. PL. (NEW.)

Our Floral Friends

Are always pleased to see any new or improved variety. We give you the above cut, introduced by Messrs. Hurst & Son, of England. Very few of you will have the pleasure of seeing this fine Petunia for some years, as the price of the seeds in England prevents them from being dispersed cheaply in our country, being 37½ cts. per packet. We well know the new Petunias that have been recently introduced are now much admired by all who have seen them. Messrs. Hurst & Son's catalogue states that this flower rivals in doubleness the Double Poppy, emulating in color the richness and delicacy of the tints of the finest Carnations.

Foreign Notes.

A NEW DEPARTURE.—Immense quantities of potatoes have been shipped at Belfast for New York.

At a meeting of the Western New York Farmers' Club, a member reported that he used 150 lbs. of phosphate to the acre on a field of barley, and

Agriculture.

Indian Corn Culture.

Indian corn will grow on any kind of soil, but if the farmer wishes a good crop he must cultivate good land. No man has ever yet become rich raising corn on poor land; and all who have had any experience in the business well know that poor land requires as much, if not more, labor to grow a crop of corn than rich land; hence the advantage of good ground. The best soils for its growth are those of a deep, rich, warm, mellow and porous nature, permeable to the air, heat and moisture. Such soils will allow the roots of the corn to extend freely, both in depth and sideways, a thing requisite for large and fine crops. Our river bottoms, and sandy and loamy grounds, which possess these properties in the highest degree, are everywhere regarded as the best soil we have for corn. Corn is indeed a very hardy plant, and will grow almost anywhere, but does not yield profitable crops to the farmer unless planted in good land, and no farmer need expect to raise much corn unless he has good, warm, rich soil.

Corn planted upon stiff clays, or hard, gravelly ground, generally proves poor, or a total failure, from the simple fact that such soils are so compact and tough as to exclude the air, the porousness and warmth necessary for its growth. The preparation of the ground for planting the crop is a very important item, and we are of the opinion that more depends on the condition of the ground when ready to plant than upon the after-culture of the growing crop. Late fall or winter plowing, especially if the ground is in grass or clover, has many advantages commendable to farmers.

If grass land be plowed late in autumn or early in the winter, the grass or clover turned down would become well rotted, and so much earlier than it would under spring plowing that it enriches the soil, and makes it mellow, and also makes the crop the ensuing spring more easily cultivated. Winter plowing also exposes the cut-worm, wire-worm and heat-worm in their embryo state to the action of the frosts and chilly blasts of the winter months, destroying them. Early spring plowing is also very useful in an overloose or too porous soil, as the early rains will then pack and settle the ground prior to planting, thus putting the ground in a better condition for the corn to take root than it would otherwise have been.

It is not necessary to plow stubble or fallow ground but once, and that after the soil becomes warm in the spring, and just before planting the crop. The selection of good seed is a very important item, and the best way to do this is to go into a field of ripe corn and choose the largest and best ears from the stalks that bear the greatest number of well developed ears, and then plant only that which grows in the middle or central portion of the cob. It would be well for farmers to change their seed every few years, as corn, like all other cereal grains, deteriorates if grown on the same soil and from the same seed for a number of years in succession. In procuring new seed, it is advisable for farmers to get that which is grown in the northern climes, as it ripens early and acquires increased vigor when grown in a warmer and more congenial climate, while seed brought from more southern latitudes will not only ripen later, but require many successive plantings before it will yield in a colder region. The time of planting corn varies considerably from the extreme Northern States to those bordering upon the Gulf of Mexico. In the Northern and Middle States the time of planting is from the middle of April to the first of June, while in the Southern States the time of planting ranges from the first of February to the middle of April.

The depth which corn should be planted varies from two to six inches, according to the nature of the soil and the time it is planted. If planted early, it should be covered shallow; if late, deeper, as late planted corn, especially if the weather is dry and hot, will not sprout if put in too shallow. The width which corn should be planted is from three to four feet each way, and the furrows should run north and south, in order that each row may be fully exposed to the sun during the day. About three plants to the hill, in good ground, is as many as will grow to advantage; but on poor soils, two are sufficient, and then the rows must not be nearer than four feet apart. After it gets up, the whole art of raising good corn—provided it is a favorable season—depends upon keeping the crop free from weeds, and the soil loose around the roots until it shades the ground, and the blossoms appear. After this no more work is required, unless it be to go

through it and cut out the few weeds that may spring up while the crop is maturing. To cultivate corn rightly, harrows, plows, hoes, cultivators must be as freely used as the surface of the ground and the nature of the season may require. It should be worked freely when the ground is dry, but more especially when it is very dry, as the ground then requires to be kept very loose so as to absorb and retain the dews of the night and the moisture of the air more readily—an experiment often tried, and always with good results.

The corn crop requires more attention from the time it gets up until it is tasseled than any other crop grown in the Northern and Middle States, and it so happens that this work can be mostly done at times when but little other work demands the attention of the farmer. Ground should be well manured before it is broken, and after the crop is planted it would be well to put about a shovelful, or even less, of rich compost, composed of wood ashes, lime, salt, plaster, &c., on each hill. Fresh and naturally rich soil will grow good corn without manuring, but if cultivated year after year, fertilizers must be resorted to, or its strength will become exhausted. In the Western States, where poor land is scarcely known, manuring land is looked on as almost useless, and to save the trouble of hauling the manure out on the farm, a stable is sometimes moved; or, if the farmer does not like the trouble of tearing down and rebuilding his stable, he carts its contents to a neighboring stream perhaps, and dumps it over the bank to be swept away by high waters. But, apart from a country which needs no artificial means to make it produce, no man need have any fears of applying manure. Corn is a very gross and rapid eater and grower, and when ground is not naturally rich enough, too much praise can not be given to artificial fertilizers. To those whose ground is rich enough we would say, manure anyhow; it will be no disadvantage to your soil. Without protracting this article to a greater length, we will not go beyond the preparation of the ground for planting, and the cultivation of the crop, which has been briefly described herein but will kindly submit the subject to the calm consideration of all who may be in any way interested in the cultivation of so useful and valuable a grain. —Ohio Farmer.

Muck on Sandy Soils.

The value of muck when applied to heavy soils is well known, but it is little known that to the poorest sandy soil an additional application of it will prove very serviceable and the expense of the carting prove a good investment. The reasonableness of this will be apparent from a moment's consideration of the subject. We see at once the great want in such a soil is a heavy, tenacious clay to give it some solidity, and to counteract its rapid impoverishment from the fertilizing elements passing at once through the too porous soil. Some soils are so extremely porous that any attempt to fertilize them by tillage would be like the child's endeavor to fill a sieve with water. Muck, though it is inferior to clay for a permanent improvement of such soil, may be applied with very good effect. As a vegetable matter it is more retentive of moisture and all elements of fertility than a sandy soil can be, and a few inches deep applied to such soil, though not causing a permanent improvement for it for culture, will enable it to give a remunerative crop of yellow or white turnips, or of potatoes, and by sowing white clover and suitable grass seeds it may be made a good sheep pasture. A writer in the *Country Gentleman* says:—

Much has been said about underdrainage, and its value is fully established. But no underdrainage is so good as that done by nature, where she has supplied a deep, porous subsoil, for then every foot of ground is sure of complete drainage. Unfortunately, where nature has provided this subsoil she has usually placed on the surface a sandy or gravelly soil, which is generally considered of little value, and its elements of fertility are constantly washing out, and it will not retain manures; therefore, they are much neglected, while the heavier soil has been expensively underdrained or cultivated under the curse of stagnant water. Knowing the great value of thorough underdrainage, it appeared to me that the leachy propensity of the porous soils could be destroyed by the application of some retaining substance, and thus obtain complete drainage at less expense and have an easier soil to cultivate. With this idea, about one-third of an acre of light sandy soil, so light as to be considered waste land, was mucked from three to four inches deep, and this was thoroughly worked into the soil. This was done year before

last. Last year it bore a good crop of potatoes with common manuring. This year it is bearing the heaviest and best corn on the farm, with no more manure than the other fields. This proves, to my satisfaction, that for many crops it is better to improve the surface soil of natural drained land than to knock the bottom out of a water-soaked clay soil, which never can be made as warm and dry in the spring, or so easy to cultivate, as sandy soil well dressed with a retaining substance, such as muck, clay or decaying vegetable matter.

Farming in England.

Mr. Mechi gives a gloomy account of the present condition of the English farmer. The last two or three seasons, he tells us, have been not merely unsatisfactory, but positively disastrous. The crops have been bad, the prices obtainable for what grain it has been possible to get into the granary have been low, and there has been a great deal of disease among cattle and sheep. The result is that farms are "going a-begging" for want of tenants, and that landlords have been obliged to considerably reduce the rents of all but the very best class of holdings. It may here be observed that a similar state of things exists in some of the most famous of the agricultural districts of Scotland. Even in the Lothians an unusual number of farms have been changing hands of late, the tenants being quite unable to make up a profitable balance sheet. Landlords had for years been increasing their rents, and it would scarcely be just to blame them for adopting that policy, for they could always be sure of having a crowd of competitors for any farm that might fall vacant. This inflation of rents has, of course, contributed to the depression of which so much is heard on both sides of the Tweed; and in Scotland as in England the owners of the soil are recognizing the necessity of relieving the pressure upon occupiers so far as rent is concerned. Mr. Mechi seems to maintain that bad farming is to some extent responsible for the depressed state of agriculture. He could point, he says, to many farms, his own included, where the capital employed is from three to five times as great as the average run of holdings, and he contends that if all England were farmed at the high level of places like Tiptree "enough and more than enough food for our population could be produced." He is probably right; but, as he himself suggests, capital will eye agriculture with suspicion and distrust until landlords come to see that it is their interest to encourage investments in the soil by "liberal and secure covenants drawn up on true commercial principles." —*Manchester Guardian*.

Hungarian Grass.

The continued inquiry as to the proper manner and time to sow this crop shows that it is still in favor, and increasing in area sown. One of the most important items and one of the oftenest violated, is not to sow it too soon; not until the middle of May, or until settled warm weather and all danger of frost is over. It is very tender, and a sharp frost after it has sprouted will kill it effectually; it is of very slow growth after it first starts, and if not encouraged to a more rapid growth by a warm sun, will fail to maintain itself in the struggle with weeds, and the crop will thus be much injured if not entirely lost. In selecting a time for planting it is well to have some reference to the time of harvesting, which may be in seventy days' growth; if sown too soon after corn planting it will need cutting at a time when the oat crop needs our attention. We have always found the middle of May to suit, both as to planting and harvest. Some have succeeded on a stiff soil, but our best results have always been on a well plowed, well manured corn field of the previous year. No crop will better pay for a careful preparation of the ground, and no one so quickly responds to the proper kind of manure. To be efficient the manure must be quick and prompt in its action so as to force a rapid growth before dry weather comes on. Guano and other ammoniacal manures will on most soils produce the best results, but in many cases an ordinary superphosphate has done well. Much of course depends upon the amount of rain to dissolve the manure and carry it to the roots of the plants. We find it safest to cover the seed with a light harrow, but have had good crops by simply rolling after sowing. It should be cut when the earlier heads show signs of the formation of seed by turning dim. A few days at this time will detract much from the value of the crop, and hence the importance of having no other crop to interfere with the horses and teams. —*Farmers*.

The Mangel Wurzel.

The sowing of mangel wurzel has been completed for the season; however, the following article on the subject on good authority is so replete with valuable suggestions, not only for the preparation of the soil and its sowing, but after, for its cultivation and storing, that we reprint it for the benefit of our readers. We have in our own experience often found great profit from lessons in agriculture read and stored away in our minds to be practised when needed.

Seed—Six to eight pounds per acre. A late sown crop might be allowed to stand thicker than an early sown—and thus a larger number of medium-sized roots would in some measure compensate for the absence of heavier roots. Sorts to sow—This depends entirely on the soil, and other conditions; and disappointment is often experienced through sowing sorts unsuited to the soil. In good, deep, rich clays and loams our Mammoth Long Red will produce the heaviest crop. On shallow soils our Intermediate and Golden Tankard will succeed best. Our Berkshire Prize, being of more robust and vigorous growth than other Globes, will do well on all soils. Time of Sowing: The Mangel is an annual, yet it likes its year to be made as long as possible. In a kind spring, those generally succeed best who sow earliest. Some bulbs, it is true, may run to seed; but the increased weight of the remainder more than counterbalances this; and if pulled when the seed stalk is just shooting, pigs do well upon them. The middle of April generally suits, unless in elevated districts where the climate is late and spring frosts prevail. Should the month of April be unusually cold or very wet, it would be wiser to wait till the first week of May before sowing—for Mangel seed will not germinate in a low temperature, but the weeds will, and they are apt to go ahead. Manure: Apply as much of the rich ammoniacal dressing, such as farm-yard manure, as you please 2 to 4 cwt. of Superphosphate, and 2 cwt. of salt per acre, which should not be allowed to come in close contact with the seed or it will destroy its germinating powers. Mangel fattens on liquid manure in any form, and guano, 1 cwt. per acre at sowing time and a second and third cwt. at the first and second horse-hoings, will be found to pay. Cultivation: Wheat is generally the preceding crop. The farm-yard manure, at the rate of 20 to 30 cart-loads per acre, previously drawn, and slightly fermented in a heap, is spread, and the land ploughed before Christmas, if possible; but, at any rate, sufficiently early to insure a frost for the thorough disintegration of the surface deep enough to form a good bed of free mould. We strongly recommend steam-ploughing where possible. The heaviest crops ever known were obtained, in a measure, by steam-ploughing to the depth of 18 inches, and the effect on succeeding crops is most beneficial. So soon in April as the weather permits, the land is well harrowed as deep as it will work freely. By this plan the moisture is retained, and thereby the seed induced to vegetate. By deeper cultivation and evaporation, the soil is often so dry that the germination of the seed is dependent on rain. Many a plant of Mangel has been lost in a dry spring by giving the land what is well described as "the orthodox amount of spring tillage," instead of permitting it to remain in a state which a farmer would call "stale furrow." The seed is drilled on the flat at 28 inches from row to row, and not too deep. The plants should be set out 15 to 20 inches in the rows, according to sorts; the Intermediate and Golden Tankard, from their peculiar shape, may be allowed to stand closer than other varieties. As soon as the thistles appear, dig them to the depth of the plough, and the after cultivation of the crop is the usual one of repeated hoeings by hand and horse labor. Storing: Late in October or the beginning of November is the best time for harvesting this crop, and this may be most economically done by contract. Men pulling roots, women removing leaves, with children throwing into carts, should be able to complete the process at from 6s. to 8s. per acre. A good method of storing is to set up two rows of hurdles about 9 feet apart, and tilt the mangels out of the carts into them until up level with the top of hurdles, when the whole may be topped up with straw, the hurdles inside being slightly lined with the same. Another such heap may be made alongside, about two or three feet away; and if the eaves of the rough thatch meet, protection and ventilation will be equally ensured.—*Sutton & Sons' Farmers' Year Book.*

Tomato Culture.

Not long since I was reading an article on this subject in a very noted work on "garden culture," which says, "not to have the ground rich," for, it says, "the plant will vine too much and not fruit." My experience has been the reverse. My plan of cultivation is as follows:—I plow or spade my ground deep—pulverize it thoroughly, first, having it very rich; lay off four feet each way, and with a shovel throw out the earth to the depth of one foot, which fill with a compost of hen manure, unleached ashes and surface soil, putting about an inch of soil on top; procure stakes four feet long and drive down near the edge of the hole; plant in center of holes, which should be one foot in diameter.

As the plants grow, tie them to the stakes. Now the main thing is to stir the soil and pinch out all laterals or suckers, like tobacco raisers do tobacco. When the plants get to the top of the stakes, pinch out the tops—be sure and keep them well tied to stakes.

If those who are in the habit of reserving their poor soil for tomatoes will once pursue this plan they will not only be convinced that it is a good one, but will never after plant tomatoes on poor soil.—*Cor. Fruit Recorder.*

RYE FOR PASTURE.—At the last meeting of the Elmira (N. Y.) Farmer's Club, the following, from a correspondent in Minnesota, was read by the Secretary:

Farmers who are in want of first-class pasture at least expense, for this season, should prepare a lot for the purpose and sow the same to winter rye, and they will soon have a pasture for sheep, calves, poultry, in fact any kind of stock, and for young lambs it can not be excelled. Heavy stock will trample it into the ground, to some extent, if put on early in the season, but later they can be kept on it at a profit. Winter rye sown in the spring will not head out till the second year, but will stool out so as to cover the ground, producing a luxuriant mass of feed that will pay every experimental trial. It can be cut for soiling purposes the second year for grown-up stock, or it can be raised for pasture, as stated before, or it can be allowed to attain its growth and mature a crop to harvest. It will also stand drouth very well, and enrich the land. From one and a half to two bushels per acre should be sown, according to the wealth of the land.

IS ONTARIO FLOUR DETERIORATING IN QUALITY?—Mr. Morrison, shipowner, of Halifax, said that were an import duty imposed on coal, Nova Scotia would buy more largely than ever of the oats, flour and pork of Canada, and that the whole trade in these commodities would eventually fall into the hands of Canada. The Maritime Province alone would buy 800,000 barrels of flour, besides cheese, butter, and everything Ontario could export to them. He, however, complained that the Nova Scotians find that the Ontario flour is deteriorating in quality, the grade extra being now no better than No. 1 was formerly.

—The Royal Agricultural Society of England announces that, at its Liverpool meeting in July of this year, it will, for the first time, admit foreign productions to competition for its valuable prizes. It has been led to extend this privilege on account of the important and intimate business relations between Liverpool and the United States and Canada, and exhibitors from both countries will be cordially welcome. The exhibition will be opened July 11, and close July 16.

MAINE has taken steps to encourage the manufacture of beet sugar. The Governor and Council have been authorized to contract with any responsible party, or company, to pay one cent per pound bounty on the sugar manufactured for ten years; provided not more than \$7,000 shall be paid in any one year. In other words, the State is willing to pay \$70,000 in ten years on beet sugar.

No Chinese farmer ever sows a seed of grain before it has been soaked in liquid manure diluted with water and has begun to germinate; and experience has taught him (so he asserts) that this operation not only tends to promote the growth and development of the plant, but also to protect the seed from the insects hidden within the ground.

Prize Farms of the Royal Agricultural Society.

An intimate knowledge of the means whereby others attain success in the business in which we are ourselves engaged is most beneficial, and a description, however brief, of the mode of cultivation pursued by some of the most successful farmers must be of interest to all who are engaged in the cultivation of the soil. Annexed is a brief report of a visit to two of the prize farms of the Royal Agricultural Society:—

A number of members of the Midland Farmers' Club recently enjoyed a pleasant trip to Clopton and Milcote for the purpose of inspecting two of the three farms to which prizes were awarded in connection with the visit of the Royal Agricultural Society to this town. At Lower Clopton they met with a hospitable reception from Mr. Henry Stilgoe, to whom the first prize of £100 was awarded. The farm is managed on the six-course system—namely, roots, barley or oats, seeds, wheat, beans, wheat—with the exception of about 20 acres of seeds, which remain down for two years. The crops then growing were:—Wheat, 93 acres; barley, 40 acres; oats, 60 acres (32 acres mown and 28 grazed); second seeds, 20 acres; mangolds, 12 acres; swedes, 31 acres; and lucerne, 8 acres; which, together with 150 acres of pasture (124 acres for grazing, and 26 for mowing), make a total of 479 acres. The cattle include eight dairy cows; 20 calves being reared yearly, and fed off at from two to three years old, and about thirty-five to forty-seven beasts fed off annually, according to the season. Eight years ago a Longhorn bull was used for the sake of the cross; but the last five bulls bought for service have been pedigree animals of the Walnut and Spencer tribes. Only 140 Oxfordshire Down ewes are kept for breeding purposes on account of the land not being healthy for lambs; but 500 fat sheep are sold off annually. Four sows of the large white breed are now kept, and their produce sold as stores. Of working horses there are only nine, steam cultivation by means of hired machinery being extensively employed. Since he entered upon the farm in 1865 Mr. Stilgoe has grubbed up several hedges and banks, and filled in ditches and old marl pits at his own expense. He has likewise drained about 170 acres, the landlord providing the pipes. Fourteen men, with one strong lad as under carter, are regularly employed with three boys and six women when the weather will permit. When Mr. Stilgoe came to Clopton there was no water except what was to be had from pits; but in the first year of his tenancy water was laid on from Margaret's Well, with iron pipes, at a cost of £97, of which landlord and tenant paid equal proportions. A diary of the men's work and of the weather has been kept during the whole of the time that Mr. Stilgoe has been in business—21 years. The company examined the homestead, the stock, and the growing crops with evident interest; but it is scarcely necessary for us to observe that they were not in a position to form a reliable opinion as to the propriety of the award in this case, as they had not before them all the data on which it was based, such as the difficulties to be encountered in the cultivation of a tenacious, heavy soil, like that in question, the produce obtained from it by skillful management, and the financial results. The land appeared to be clean; the grain crops—wheat more especially—promising; the roots, considering the unfavorable season, fair; the stock in thriving condition, the sheep being a very even lot; and the fences in good order. We may add that one of Fowler's steam cultivators, drawn by two engines of 12-horse power each, was in active operation in grubbing up a twelve acre field of two years' seeds, the soil here being a gravelly clay. On leaving Clopton the party drove to Milcote, and inspected the farm of Mr. J. C. Adkins, to which an extra prize of £25 was awarded on the recommendation of the judges. It comprises 363 acres of light land, 280 of which are arable, 51 pasture, and 52 meadow. It is cultivated on the six-course system, the course of cropping being roots, barley, seeds, wheat, beans, wheat. The crops of the present year are wheat, 89a 3r 28p; beans, 17a 2r 22p; peas, 31a 1r 16p; barley, 46a 2r 5p; seeds, 45a 2r; lucerne, four acres; cabbage, four acres; turnips, four acres; swedes, six acres; and mangels, 28a 1r 15p. Twelve horses are kept, together with 20 dairy cows, the produce of which is sold off at three years old; 230 lambs, 149 breeding ewes, 42 cull ewes, 50 theaves, and 9 rams. The whole was in excellent order, and the crops remarkably good; the wheat being exceptionally fine.

Buckwheat—Its Cultivation.

Buckwheat may be considered a fallow wheat. From the late season in which it is sown there is full time to give the land the benefit of a good fallowing, and the excuse of "want of time," cannot be pleaded if weeds be not thoroughly destroyed—killed root and seed. All Canadians know how much buckwheat adds to the pleasures of the well-provided breakfast table; but even if sown, not for use as a breadstuff, but for the improvement of the soil by plowing it as green manure, its value is very great. It is true its fertilizing properties are not equal to those of clover, but it has the advantage that it will produce a heavy crop on land where clover would be a certain failure, and grown, as it often is, merely to clean and fertilize the soil for another crop, it has its peculiar profit.

Buckwheat must not be sown too early, or the heat when it would be in blossom would prevent its perfect fructification, and there would be numerous blasted kernels. On this account it is better that it should be sowed so that the hottest season shall have passed before the buckwheat is fully in bloom. While care is taken to avoid this danger of sowing too early, it is needful at the same time to guard against the risks attendant on sowing crops so late that our Canadian early frost may not come on them before they are matured. This difficulty of seizing just the proper time we have continual experience of in our farming and gardening here. Some seasons, buckwheat sown in July any day before the 16th, may produce an abundant and well ripened crop, but this is only in some seasons. However, taking all things into account, it is worth the risk; even if the frost catch it unripe, why, at the worst, it can be plowed under to enrich the ground; and for this purpose it is well worth the expense of seed and labor.

It is necessary, in order to secure a good crop, that the land be well tilled. The finer the seed-bed the earlier and surer the germination will be, and no little of the productiveness of a crop depends on the early start and vigor of the young plant. Besides, an additional plowing or cultivating will not only serve the growth of the young plant, but it may destroy weeds that might have survived the former plowing, and this is a great object of a fallow. Regular seed time, June 1st to 10th.

The Hessian Fly.

From reports of the Entomological Society we glean some very valuable information concerning this pest, the Hessian Fly. This insect is said to be of European origin, and to have been brought to America in straw used for packing, in the year 1776. In Long Island, N. Y., it was first observed, and having multiplied there, it gradually spread over the southern parts of New York and Connecticut, and continued to spread inland at the rate of fifteen or twenty miles a year. In this manner the tiny pest gradually spread over the country, and has been found in almost every locality where wheat is grown. Canada was not invaded by it till about the year 1816, when it became prevalent in Lower Canada. It was first noticed in Ontario in the year 1846.

The Hessian Fly, as a general rule, passes through two generations annually. The first of these occupies the autumn, winter and fore part of spring, and is reared at the roots of the young plant, slightly under ground. The second occupies the remainder of spring and summer, and is nurtured in the lower joints of the straw. The time when its several changes occur is, however, varied by the climate, the state of the weather, and perhaps other contingencies.

Our crops of winter wheat are liable to two attacks of the Hessian Fly, one generation reared at its roots producing another which occupies the lower joints of the stalks. Thus the larvæ and pupæ are in it continually from the time the tender young blades begin to appear over the ground in autumn till the grain ripens and is harvested the next summer. Spring wheat can rear but one

brood of the insects; they consequently resort to it but little, if at all; nor can it sustain itself except in districts where winter wheat is cultivated, in which to nestle during the autumn and winter.

When hatched from the egg, the little wrinkled maggot creeps out of its egg-skin, crawls down the leaf, enters the sheath and proceeds along the stalk usually as far as the next joint below. Here it fastens lengthwise, and its head downwards to the tender stalk, and lives upon the sap. It does not gnaw the stalk, nor enter into its central cavity, but, as it increases in size, it gradually becomes imbedded in the substance of the stalk. Two or three larvæ thus imbedded in a stalk serve to weaken the plant, and cause it to fall down, or to wither and die. In this condition it remains till it finally comes forth as a tiny two-winged fly. Of course the size and value of the grain is immensely lessened by the absorption of the sap, which ought to go to filling out the ear.

NATURAL REMEDIES.—The Hessian Fly is preyed upon by a number of parasitic insects, whose combined attacks are computed to destroy nine-tenths of every generation of this pernicious foe. It is owing almost entirely to these allies that our crops have been preserved to so great an extent from the ravages of the Hessian Fly.

ARTIFICIAL REMEDIES.—The best precaution to take, where the insect has shown itself in numbers, and where the Wheat Midge is not apprehended, is to sow the next crop of fall wheat as late as can be done with safety in the autumn—about the middle or towards the end of September. This course prevents the parent fly from obtaining any young wheat upon which to lay its eggs, and destroys the prospects of another generation. A fertile, thoroughly cultivated and well drained soil is as effectual a means of escaping loss from the attack of this insect as any that can be mentioned. Benefit may also be derived from sowing early an approved flinty-stemmed variety of wheat, which is thus more capable of resisting the fly's attack upon it. But after all, the chief reliance for immunity is to be placed upon the labors of the parasitic enemies of the fly.

Another New Plant—New and Extraordinary.

A new agricultural plant for cattle-feeding and paper-making has been introduced to public notice by Mr. William Gorrie, Rait Lodge, Edinburgh. It is a variety of the tree-mallow *Lavatera arborea*, the natural habitats of which in Scotland are the Bass Rock, with other islets in the Firth of Fourth, and Ailsa Craig. Its ordinary heights vary from six to ten feet, but it can be grown to more than twelve feet. It is a biennial, but the first year it may be planted after the removal of any early crops and matured the following year. Chemical analysis of its seeds show them to be fully equal in feeding properties to oil-cake, which is now worth in Scotland about \$50 per ton, and paper-makers offered the same price for the bark that they now pay for esparto grass, which is also about \$50 per ton. This shows a return of about \$400 per acre for the seed and bark, and it is expected that the excess of fibre in the latter will allow the heart wood being mixed up with it, which will add very considerably to the value of the crop.

Small Farms.

Every one is almost obliged to do some work from choice or necessity. Comparatively few are able to get along without an occupation. There are so many callings some are puzzled to make a suitable choice, as they are so crowded as not to be lucrative. Some require too much means, and only the favored few are able to undertake them.

Farming to some seems to be not so genteel—there is manual labor in it, and attention required to it. That also is necessary to success in everything. In farming, labor and brains are required; your harum-scarum sort of a fellow is not wanted on a farm more than anywhere else. Men of small means cannot carry on a large farm better than an empty sack can stand on an end. Labor on a small farm is part of the stock-in-trade. Two horses to a plow would break up a good deal of ground, and a harrow would level it over, and then it is ready to be planted or seeded with corn or wheat drills. The seed necessary to plant or put in the wheat is not very costly; the balance of implements need not be very expensive. The dwelling and farm offices, as they are called in some places, are not expected to be on a very extravagant scale. A cow or two and some few sheep and hogs would make the concern complete. After a

start, with care and industry, the farmer, under ordinary circumstances and luck must succeed. The work varies with the season. The good farmer must look ahead and must have everything provided and ready for the different work as it comes around. Labor and plans must be modified according to the weather and variations as to drouth, &c. We may now expect the farmer to enlarge his business as merchants and others would. There must be a beginning in everything. Here we might say as many succeed who start on a small scale as those who have abundant means. What signifies abundance if there is not industry, economy and management? Property will not take care of itself, and without proper care will gradually disappear.

My aim in this is to awaken thought and encourage young men to enter with zeal as agriculturists. Not every one is able to farm on a large scale at first. Not more will fail in the business than do merchants and speculators. One is more apt to succeed in different operations who has mastered one practically and financially. We have heard of merchants making good farmers and farmers good merchants. It often happens that farmers make good legislators, but it is not advisable for them to become politicians and office-seekers. In course of time there will be more small and moderate-sized farms than now. Where labor is scarce, farmers can assist each other by interchange of labor. It might be necessary to modify farming to suit the wants of the country; grazing might pay better than grazing and farming together.

The small farmer may be independent—his house will shelter him, his farm feed and clothe him. Therefore, "be always sure you are right, then go ahead!"—*Cor. Am. Farmer.*

General Items Interesting to Farmers

Faust's hay loaders are very efficient; they will put the hay on the wagon as fast as any man can load it. We saw it working last summer in Oxford. The man who has it is quite satisfied with it. On many farms it will pay for itself the first season. The draught is scarcely noticed when hitched on behind the wagon. The work is done by means of steel teeth that revolve and gather up the hay; a light carrier delivers it on the wagon. There are none of these implements made in Canada, but a great many are manufactured in the States; more will be introduced into Canada this year.

Exhibition Grounds.

In Toronto a few interested parties have caused a road to be run through the grounds in which the Provincial Exhibition has been held. The interests of traders and speculators have been permanent. It is now estimated that the citizens will be taxed to the tune of nearly \$200,000, and not have as convenient a place for the exhibition.

An attempt is being made to destroy the beautiful exhibition grounds in London. Some speculators may be desirous of making a small fortune by the change; they care not for the public good. Exhibitions, when held at a great distance from the centres of population, are never so well attended.

If the citizens of London allow themselves to be deprived of their present exhibition grounds, they will never have any near as good. The consequence would be dissatisfaction to visitors, as no railway or street-car accommodation meets the requirements for short distances and large and sudden crowds.

In this issue you will see the advertisements of the best Horse Rakes manufactured in our Dominion. There have been other manufacturers who commenced making Horse Rakes, but have nearly ceased operations. You must read what each advertiser says, and make your selection; they are good, efficient implements, and soon save their cost.

Read Messrs. Harris' advertisement of the Kerby Reaper in this issue.

The California hop crop this year promises to exceed in profit all other productions of the farm. Hops have proved a failure in England, and the demand for California's surplus is accordingly very good at remunerative prices. It is a temptation to any farmer who has a strip of rich, alluvial soil, to engage in hop-growing, especially when the market ranges, as at present, from 24 to 28 cents per pound, and when he can produce 2,000 to the acre, as many farmers average.

The great sale of Shorthorns of 1877 will take place in London on the 6th and 7th of June, and one and a third fare per G. W. R. and G. T. R.

See new advertisements for Ayrshire stock; information about bees, hay loaders, tedders, hay rakes, and other requirements.

A farm in Ireland of 14 acres paid rent, kept 4 cows and a horse, and supported a family. Another of 8½ acres paid \$50 rent, fed two cows and the family, and yielded a net return of \$200. In Belgium, 2½ acres sustained a farmer, his wife and three children, and a hog and a cow. The secret of these results is to be found in manure—the foundation of all good husbandry, and next to labor, the great element of the farmer.

The waters of Rice Lake and tributaries, together with the River Trent down to the Bay of Quinte, and also that portion of the Otonabee River, extending from its inlet at the Lake of Lock's Bridge, Peterboro', all within the counties of Hastings, Northumberland and Peterboro', in the Province of Ontario, are set apart, by proclamation in the *Gazette*, for the natural and artificial propagation of fish during the space of two years, from the 1st of May, 1877.

Should your wheat be too rank and in danger of lodging, you may go over it with a long roller before it shoots into head. It will check the growth; the wheat will rise again. It has been known to save a crop.

Poultry Yard.

Fowls in Confinement.

With methodical care, the writer has found one breed of fowls to be as useful as another, according to the requirements demanded of them, but the same kind of treatment will not apply to all. One breed will bear confinement as well as another, and do well if managed aright. It will not answer to shut up wild, untamed fowls that have always been accustomed to their freedom in a wide range, and confine them in close quarters. They will pine, beat and bruise themselves against their prison walls, and if they do not kill themselves outright, will become valueless. They must become accustomed to confinement by degrees, commencing with the chickens, and when once confined they require constant daily care and attention. Fresh pure water to drink is an all-important thing; next come clean yards and buildings, and healthy, suitable food. No one would think of confining a pen of Brahmas for egg-production, and supplying them with a full feed of corn, for the reason that it would fatten them too much, and cause them to become heavy and sluggish, and cause a decrease in the amount of eggs. Breeds that are inclined to over-fleshiness should be kept on a limited ration, since the overplus of feed does not go to increase the amount of eggs. Some breeds, like the Asiatics, require considerable bulk or filling, without so much heat. Wheat bran, moistened with sour milk in the summer season, is exceedingly good to produce eggs, if fed to the larger breeds, together with a feed once or twice a day (distributed according to judgment) of cracked corn or buckwheat.

There is no breed that will not bear confinement (among the common domestic breeds) if treated according to the requirements of their peculiar nature. The writer is becoming more and more opposed to feeding whole corn to fowls, especially in confinement. It is certain that fowls kept in close confinement for any length of time are weak. They miss the constant exercise so natural to them, are apt to become feverish, and frequently sicken. It requires a strong bird to digest a full crop of whole corn. The Spanish class will bear confinement as well as any, but it is frequently necessary

to clip the primary quills of one wing to keep them within the limits of an enclosure. Every one is not aware, perhaps, what a large amount of green food fowls will consume when at liberty. When confined, we should study their different natures and habits, and supply them with the food necessary for their well being, and which they would obtain if at large. We must make it a study if we would be successful, and endeavor, as well as may be, to supply, either in reality or by imitation, that manner that they would naturally choose in their state of freedom. Fowls are fond of fresh, loose earth to scratch and wallow in. Where one has room, and the convenience, a movable fence is very beneficial. When the yard becomes so filthy with the droppings as to be disagreeable to the fowls themselves, with this fence they can be shifted to fresh earth, and their old quarters can be thoroughly cleaned and renovated.

The great aim at the present day appears to be the largest amount of egg-production, and that breed which will give the greatest amount on the least feed is to become the popular one. But tastes as well as judges differ. If we want hens only to sit, in the writer's opinion there are none better adapted to the purpose than the pure bred Light Brahmas, choosing the lightest and smallest bodied specimens. They make excellent mothers, are quiet, and bear confinement in close coops remarkably well. The only drawback is their great weight, which unfits them to become mothers to the smaller breeds that are delicate when first hatched, or even when a week old. There is also a difference in hens hatching their eggs. Some are uneasy at the first peep of a chick, which often peeps in the shell before breaking it. This uneasiness is frequently fatal to a whole brood, as the mother, in her movements, crushes the shell and destroys the chick. A hen that will sit quietly and persistently under all emergencies is a valuable bird for hatching; but one that is nervous and easily disturbed should never be allowed to sit the second time. The Light Brahmas have generally proved good hatchers. At present the writer is laboring under the idea that habit, even among barn-yard fowl is contagious. After procuring Brahmas for the sole purpose of hatching and rearing the Brown Leghorns, the Brahmas appear to have patterned after them, and become layers instead of sitters, thus changing their nature.

Errors in Poultry Keeping.

Although there are many widely different breeds of fowls, adapted more or less to the varied wants of the farmer, there are some general rules for their management which are applicable everywhere; and many flagrant errors are made by most farmers. One serious error is the common custom of keeping hens until they become too old for profit, because they were choice birds and good layers when young. A hen of any breed will lay only about half as many eggs the second year as the first after she commences laying. All fowls kept by a farmer after they are two years old are kept at a loss, as far as money is concerned. When a whole flock is allowed to run without killing off the old ones and replacing them by pullets, disease is sure to attack them. They become liable to gapes, cholera, &c., after they become aged. If the practice of keeping only pullets is once followed, I am sure that no farmer will ever abandon it.

Another bad practice is that of allowing the fowls to become wild, so that they are afraid of any one and hide away their nests, and the few chickens they hatch lose their lives from want of food, care and shelter. To be sure, chickens hatched late in the summer, and brought up in the fields by a wild mother, are hardy, but this practice is not profitable, as the cost of wintering exceeds the summer returns. As a general rule, however, summer chickens are more profitable than the very early ones, as they get a more varied diet, better exercise, and are healthier in every way. But fowls, to be profitable, must be kept tame. If, however, the chickens are to be grown for sale for breeding or show purposes, it is necessary that the chickens should be hatched as early in the season as possible, so that they may attain full growth and feathering by fall.

Another error is in trying to raise the Asiatics and other large fowls. They require much more feed and care than the Polands and other small breeds. As far as my experience goes, the Black Spanish and White Leghorns are even more profitable than the Polands. I find, also, that if any breed is allowed to run year after year without

change of cocks, it does not take long to make that breed unprofitable and liable to disease. Some poultry fanciers say it is necessary to breed in-and-in, to keep up the purity of the blood. If this is so, then I prefer fowls that are not pure bred. It will not do to transgress the laws of nature in any direction, and nothing shows quicker a deviation from these laws than a flock of fowls.

Plymouth Rocks.

This variety is becoming very popular, and it is really a good breed; they are good winter layers, and the young chicks are strong and hardy; they are first-rate sitters and good mothers, and they are not liable to disease; they are also a first-class table fowl. There is much to be said in their favor; and as they are possessed of so many good qualities, there seems to be no doubt that they are a breed made up by crossing different breeds, but there seems to be no limit to the number of aspirants for the honor of their introduction. Of course we must look upon most of this as merely a cheap way of advertising, as it is hardly possible that there are a dozen originators of the breed, and that there are as many breeding different strains, and that each has the only original strain; nor is there any doubt that they have been bred for a much longer period than most of the aspirants for the honor of producing them have been breeding fowls of any kind. They have been bred in Canada for more than twenty years; although they have been improved very much in color during that time, it is notorious that they do not breed any truer to color now than they did twenty years ago; in fact, it is doubtful if they breed as true now as then, as they are very liable to throw black chicks, and from the same flock you will have some much too light and others just right, and we believe the fault lies in the breeder, who, in many cases, does not care about improving the breed, but is satisfied if he can get a trio or two of good show birds, when ninety per cent. of his stock are worthless for the show pen or sale as a pure breed.

PRESERVING EGGS.—A writer in the *English Mechanic* says: In 1871-2, I preserved eggs so perfectly that, after a lapse of six months, they were mistaken, when brought to table for fresh laid eggs, and I believe they would have kept equally good for twelve months. My mode of preservation was to varnish the eggs as soon after they were laid as possible with a thin copal varnish, taking care that the whole of the shell was covered with the varnish. I subsequently found that by painting the eggs with fresh albumen, beaten up with a little salt, they were preserved equally well and for as long a period. After varnishing or painting with albumen, I lay the eggs upon rough blotting paper, as I found that when allowed to rest till dry upon a plate, or on the table, the albumen stuck so fast to the table or plate as to take away a chip out of the shell. This is entirely obviated by the use of this blotting paper. I packed the eggs in boxes of dry bran.

DRIED EGGS.—A large establishment has been opened in St. Louis for drying eggs. It is in full operation, and hundreds of thousands of dozens are going into its insatiable maw. The eggs are carefully "candled" by hand—that is, examined by light to ascertain whether good or not—and are then thrown into an immense receptacle, where they are broken, and by a centrifugal operation the white and yolk are separated from the shell very much as liquid honey is parted from the comb. The liquid is then dried by heat, by patent process, and the dried article is left, resembling sugar, and it is put in barrels, and is ready for transportation anywhere. This dried article has been taken twice across the equator in ships, and then made into omelet and compared with omelet made from fresh eggs in the same manner, and the best judges could not detect the difference between the two. Is this not an age of wonders? Milk made solid, apple-butter made into bricks! What next?

CHARCOAL FOR POULTRY.—Charcoal is so necessary to the healthy condition of fowls, that not to provide it for them is to open the way for the appearance of cholera among your flocks. The *German town Telegraph* says: If any one will put an ear of ripe corn into the fire till the grains are well charred, and then shell off the corn and throw it to his flock, he will see an eagerness developed and a healthy condition brought about which will make a decided improvement. All pale combs will become a bright red, that busy song which precedes laying will be heard, and the average yield of eggs will be greatly increased.

Veterinary.

Shot of Grease, or Weed in Horses
(Lymphangites).

SIR,—I have a good horse eight years old; I left him in the stable apparently all right at night, the next morning he was standing on three legs. I could see nothing wrong with the hind leg that was bad. He could not put it to the ground without pain. I could hardly touch the inside of the leg, but could see nothing wrong. Please let me know what is the best to do with him.

A SUBSCRIBER.

[We have referred to our Culloden veterinary correspondent; he says the disease is "Shot of Grease, or Weed in Horses" (Lymphangites).

This is the season of the year that this disease is most common among Canadian horses when they are hard worked, and highly fed, and generally appears after a day's rest, when they have had the same feed as when working. It is caused by too much nourishment being taken into the system forming more chyle than the absorbent vessels can carry, consequently causing congestion or inflammation of the lymphatics or absorbent vessels.

It is the hind legs that are generally affected, but the fore legs are also liable to the same disease.

The treatment requires to be more constitutional than local. Give a smart dose of purgative medicine, from six to eight drs. of Barbadoes aloes, with 1 dram of calomel in a ball. There is not much danger of giving too large a dose, as the bowels are generally constipated, and without purging treatment is of little avail. Bathe the leg well with warm water twice a day and rub till dry, taking care always to rub with the grain of the hair. Do not in any instance apply a blister or any irritant to the leg, as it greatly agitates the disease, and in many instances leaves a permanent thickening of the leg. After purging, give a teaspoonful of ground saltpetre in the food every night for a week or ten days. Feed on bran mash, boiled oats, and other easily digested food, and give gentle walking exercise.—VET.]

SORE TEATS.—I have two cows that have sore teats. I am afraid they will become useless, as I have had other cows dry up before now. Can you give me any remedy?

S., Bryanton.

[See "Garget in Cows" on page 135.—Ed.]

SIR,—Mr. Emmett wishes to know if you could give any information that would prevent a falling of the wethers in a cow that has not calved. I have used alum-water and Cayenne pepper for a wash without fail, but it will not prevent his cow casting it again. She is in good condition. If you should know anything, be kind enough to let us know in the next ADVOCATE. T. D., Sparta.

[This complaint appears to be constitutional with some cows, but there is not much danger as abortion seldom occurs, and the uterus cannot be inverted till the fetus is expelled.

The animal should be kept in a stall with the hind end elevated so that the uterus would gravitate forward. Give occasional doses of an ounce and a half of laudanum to prevent straining; and the bowels kept regular by gentle laxatives, such as from half a pound to a pound of Epsom salts, as the animal may require. When the uterus protrudes so as to come in contact with any dirt, it should be washed with tepid water, and apply a little of the following lotion:—Sulphate of zinc, ½ dr.; alum, ½ oz.; cold water, 1 quart; laudanum, 1 oz. It is seldom necessary to apply a truss and pad. Feed well, but on easily digested food.—VET.]

SIR,—Can you or any of your readers inform me if there is a cure for black leg in cattle, or how it originates, as I have lost several valuable cattle with it this spring. Please insert in your next number, and you will much oblige.

A SUBSCRIBER, Hemmingford.

[Black leg is a blood disease caused by feeding on rich or succulent food, sometimes by impure air in stables. Treatment—Give doses of purgative medicine (such as salts or oil), followed by doses of black antimony, nitrate potash and sulphur. Put scaton in dewlap. If ulcers have formed, encourage matter; open and treat as common wounds.

Prevention is better than cure. Do not let cattle on too rich pasture at first in spring. As soon as disease is noticed, change to poor pasture or feed on hay and oats in stable.—RUDD & TENNENT, Veterinary Surgeons, London.]

Care of Horse's Feet.

When the foot is gone, there is no horse left. There is an old adage to this effect, the truth of which is incontrovertible. Yet no part of a horse's anatomy is worse used than the foot, and therefore no more frequent diseases to which the notice of the veterinary surgeon is brought than those of the feet. This comes of the unwise yet obstinately maintained fashion of rasping, cutting, burning, tarring, and greasing the hoofs. It would occupy too much space here to describe the anatomy of the foot fully, but it is a very timely matter just now to consider the structure of the horny outer covering or crust of the foot, by which the delicate inner parts are protected.

Horn is a fibrous substance, which contains 25 per cent. of water. The fact that it contains water in its normal composition is a very important one, and needs to be stated here, because, unless specific reasons are given, very little weight is generally accorded to all that may be written or said about the proper treatment of the horse's foot, by either horse owners, farmers, blacksmiths, or professional horseshoers. When horn is deprived of water it becomes dry, hard, and without elasticity, precisely like a piece of dry glue, which breaks and splinters into glassy fragments. It is necessary, therefore, that this water should be retained, to keep the horn in good condition. The common practices of burning the sole to procure a fit for the shoe, or rasping the outer surfaces to get a good shape, and so tarring and greasing the hoof, all tend to drive the water out of the horn, and not only to harden and contract it, but to make it brittle. In this condition its usefulness as a protection for the foot is at once impaired and partially destroyed. When the sole is burned by contact with a hot shoe, it is obvious that the water in the portion of the horn that is heated must be driven off. That is so obvious that no more need to be said about it. When the smooth, polished, hard surface of the horn is rasped away, the softer inner fibrous portion is exposed to all the evil influences of evaporation and degradation, and the numberless pores and cells or interstices of the horn are forced to give up the water they contain. The horn in this case is also made dry and brittle, and, of course, contracts. Tar contains an acid and a volatile oil, which evaporates and leaves a hardened pitchy mass. When tar is applied to the hoof the acid acts chemically upon the horn, and hardens or disintegrates it, and the oil, evaporating, leaves a space between the fibres filled with the hardened residue. It operates precisely in the same manner as when it is applied to leather—as a sole of a shoe, for instance—as a preservative, the leather in a few days becoming hard and unyielding, impervious to moisture, and dry. As with tar, so with grease; both these substances drive out the water from the horn and occupy its place, in time hardening and acidifying the substance of the hoof crust rendering it brittle, and contracting it.

The substance of the frog is horn, but is of a softer and more open texture than the sole and crust of the hoof. It is, therefore, more easily affected by injurious conditions, and when it becomes deprived of its water it shrinks more than the more solid horn. From this explanation of the character of the horny covering of the foot any reasonable horse owner may learn how to treat the hoof, and how to avoid injuring it. When a shoe is to be fitted, the edge or wall sole should be prepared by cutting or rasping and not by burning. Indeed the shoe should be fitted to the foot, and not the foot to the shoe. When, from bad management, the sole and the frog have become dry and contracted, no grease or tar should be used; but water should be used freely, and then the hoof should be dressed with glycerin, which will mix with water, and does not displace it. Glycerin contains no acid or acid properties, but is soft, bland, emollient, and does not evaporate. It therefore softens the horn, and allows the fibres to expand. Contraction is thus prevented or overcome when it has actually occurred.

Stock and Dairy.

Early Maturity of Beef.

In a former number of the ADVOCATE we referred to the comparatively great profit of fattening beef for the market at an early age. This has always been claimed as a great benefit from feeding well bred stock. At the time of our previously writing on the subject, young beeves well matured and in first-class condition were sold in the London market at 20 months old—"baby beef" it was called. The owner of those "baby beeves" then erected buildings to carry out that system by which he had succeeded in turning cattle of his own breeding at very early ages. In reference to this very farm, we have further information relative to the last year's results, which will, we are sure, be of interest to our readers. Eleven beasts were sold, averaging 18 months 2 weeks old, which brought, one with another, £20 18s 6d a head. The highest was £24 for an animal 17 months old, and £23 for one a month younger. These beasts were all sold by auction, and their estimated live weight was 50 score, 15 lbs.; this divided by 80 weeks, the average age of the animals, gives a weekly increase of 12½ lbs.

An English agricultural writer, referring to these early matured cattle, compares the profit from their feeding with the profit, if it can be called profit, returned from extra-fed animals shown at the last meeting of the Smithfield Club, and proceeds as follows:—

From these figures we can judge how very expensive and unprofitable show feeding is. There is, however, the chance of a prize, and now and then a beast leaves a handsome profit. The hope of distinction, and the ambition to produce a good beast, will be a sufficient incentive to insure competition. It is not to discourage such exhibitions, which are advantageous as a means of comparing the capabilities of different kinds of stock, that we draw attention to these figures; but to show how much more profitable is the process of feeding during the youth of the animal than at a more advanced stage. The animals in question—which, by the way, were ordinary Shorthorn stock—paid over 5s a week from birth, the cost of keep being very much less than it would be at a more advanced age. After the calf is weaned, and until one year old, the keep is not expensive, and at no time could these young animals have eaten more than 4 lbs. to 5 lbs. of artificial food per day, had they been fed on the ordinary matter; that is, kept in poor, low condition until two years old, and then put up to fatten, the cost up to that period would have been somewhat less; but the last year would have been costly, and the animals might have made £25 to £26, hence the returns would not have exceeded 3s 6d a week—a price under the cost of feeding. Such is the general result where animals are bred or bought in according to the old-fashioned system. Now, there can be no doubt that these beasts paid well, or at least left their manure free of cost—a result that is highly satisfactory. How, then, was it managed? The great point of the operator is to keep the animals under cover, never turning out, cutting a succession of green food during the summer, and not losing the calf flesh. The animals, constantly under the master's eye, fed with regularity and judgment, are kept in a thriving, improving state, never exposed to sudden changes of temperature; the minimum amount of food is required for fuel, and the progress is rapid and satisfactory. Nor must we lose sight of the fact that this constant housing results in the manufacture of a large quantity of valuable manure with the minimum expenditure of straw. For such a system, which it is evident has much to recommend it, covered yards are very advantageous; and now that the straw of our cereals is likely to be of equal, if not greater value than the corn, tenants who have liberty to sell straw, which under proper restrictions is desirable, if we want to make most of the land, will find it worth while to pay interest on the outlay; and landlords who wish to keep good tenants must not shrink from such improvements or fear to give such encouragement; for it is only by high farming, by the judicious employment of capital, that English farmers can hope to meet the competition with which they are threatened.

Is There a Profit in Shorthorn Breeding?

Those who have expended such large sums in purchasing Shorthorns to establish a "Herd" sometimes find that whatever good they may have been the means of doing breeders at large, it has not been with great profit to themselves. Sir Wilfrid Lawson who has had considerable experience in the matter, said at a Shorthorn sale:

It is rather difficult to make an interesting speech on farming matters now-a-days, because the romance of farming is gone. In the old days we used to have in the hay-making time all the servants in the house and the neighbors turning out in picturesque robes to make the hay. Now all that is done by a complicated instrument. Then in harvest time we used to have the beautiful robes of reapers and gleaners. Now all that is done by horse-power. The ploughman is almost gone. Now all our fields are plowed by a mechanical monstrosity belching out fire and smoke, which has entirely outstripped the ploughman who used to be the emblem of simplicity, propriety, and stupidity (cheers and laughter). The only romance that remains for farmers is the Shorthorns, and I am sure you will agree with me that their symmetrical forms will be a pleasure to the artist, their massive frames delight the grazier, and their aristocratic pedigree give promise to the breeder of an ample profit for his exertions. Such a herd as I have described you will see to-day brought into the ring. But it is not all gold that glitters (hear, hear). You must remember the anxieties, the disappointments, the mortifications which the Shorthorn breeder has to experience before he can bring his animals before you in the condition in which you see them to-day. Some won't breed, some that will breed die, and some that are expected to bring long prices do not realize the expectations of the breeders. Besides, it is a very expensive business (laughter). I was reading the other day the "Life of Lord Spencer," who was a distinguished Shorthorn breeder (hear, hear) and I find that in conversation with a friend one day, he said he had had a capital year with his Shorthorns. "How much did you make?" asked his friend. "Make," he said, "why I only lost five hundred pounds" (laughter). And he proceeded to say that his annual loss, which he looked upon as certain, was \$3,000. I mention this to show you the anxieties and troubles we have to go through, and to show you that you ought to consider a Shorthorn breeder as a patriot working for the good of his country (cheers and laughter).

Horses in the States.

BY H. G. CRICKMORE.

The following extracts are from a paper read recently before the New York Farmer's club:—

Having endeavored to show that there is a market for our horses, the next thing is to show how the market can be supplied, and in this respect I must crave your attention for a moment and travel directly from the subject matter of this paper. As a turf reporter it has long seemed to me that nearly all the State and county agricultural societies have been somewhat neglectful of their true interests, and instead of encouraging the breeding of useful animals in their immediate districts by offering encouraging premiums for young stock, brood mares and stallions, they have offered a few cheap medals, with little or no attention or accommodation to exhibitors or the exhibited. At the same time they have paid too much attention to the trotting of a lot of worthless geldings, which for any real use were not worth their shoes. Instead of risking so much money on "exhibitions of speed," the societies should buy a half or quarter Hambletonian stallion, or a thoroughbred stallion—the get of Lexington, Australian, or in fact any well-bred stallion—possessing bone and substance, with good trotting action if a trotter—a horse with intelligence, that would at once win the eye, and if necessary pass the inspection by a German or Russian Government inspector. Any association adopting such a course, with the presumption that the horse would be in the hands of an honest, capable man, devoted to his business, would in a few years introduce a new source of wealth to their members, instead of their mares, as is now often the case, dropping worthless colts and fillies, possessing neither shape nor strength, and often inheriting diseases rendering them at five years old only fit to drag out a miserable existence in a brick-

yard. Such an association would accomplish at least one object for which it was organized. Not only would the members of the association benefit by the services of their stallion, but new interests would spring up in the vicinity. Every breeder would naturally endeavor to show the best stock, and in course of time "horse fairs" would become one of our most interesting spring and autumn holidays. Buyers would be attracted to the neighborhoods that excelled in any special breeds. Some counties would excel in carriage horses; others in saddle-horses. One would become famous for its chestnuts; another for bays, blacks or grays, as Lincolnshire in England is famous for its roans.

A few words more on the subject of stallions. Farmers and breeders cannot be too particular to what they breed their commonest mares. Cheap service by some big, peripatetic, soft-looking brute, with a pedigree that is said to run back for a century or two, should be especially avoided. In fact, it should be made a criminal offense for any man to "tramp" through the country with a stallion claiming a pedigree which is plainly false. But what would be better, in my estimation, is that the several State governments should take the subject in hand. No stallion should be publicly advertised without first having been duly examined by a competent veterinary surgeon, and if any pedigree is claimed it must be vouched for by proper proof, the evidence of which shall be duly set forth in the license that those controlling the stallion shall be compelled to exhibit. No horse should be licensed for such public service that does not come up to a standard to be prescribed by a State agricultural board. Of course the care must not all be on the part of the horse—the mare should at least be healthy, of good size, and properly taken care of, at all times.

Personally, I would even go further in the matter of horse-breeding, and would like to see the establishment in large agricultural districts of national or State stud farms similar in character to the imperial *haras* of Germany, Austria (Hungary) and Russia, believing that with proper economy and thrift all money invested would pay amply in the long run. Of course under our present political system such an idea is Utopian, but it is a success in Europe—Kisber, the winner of last year's English Derby, having been bred on the Imperial farm at Kisber, Hungary, from whence he was sold as a yearling—and there is no real reason why our State or National Government should not give some support to an industry that can be made so productive.

The Pig.

Black or slate-colored pigs are freest from skin diseases in hot climates. The choice is practically between the Essex and Berkshire for males, with which to improve the native stock of hardy grubbers of the root-or-die variety. Those who have tried the former have been delighted at first, but after a few years began to recall with longing the lean hams, and thin but solid and flavorful bacon, of the old race-horse breed. The trouble with the Essex pigs, for the South, is that they are not active enough. They are of the eat-and-sleep, and sleep-and-wake-to-eat kind, and their grades are of course like them. The side fat is superb, and so is the leaf lard, and so far the breed is all that could be desired; but the hams and shoulders are too fat for profit, and the ham is not marbled with fat like the Berkshires. These (the Berks) are much more enterprising, more wide-awake, less easily controlled, but good foragers. Their grades are a wonderful improvement upon the original stock, may be made very fat, and yet the proportion between fat and lean in the hams, shoulders and side pork or bacon is such as to develop and preserve the excellencies of their meat. The hams are large and rich, and juicy with diffused fat. Berkshires are not quite so easily fattened when penned and systematically fed, as the Essex grade, but they will take much better care of themselves in the woods, and when penned for fattening may be finished off with half the feed the original "land pikes" would require.

With many Northern and Western breeders the Essex is a more profitable pig than the Berkshire, because his nature leads him to take a little exercise, so that all he eats goes to flesh and fat. Respiration, which, if rapid, reduces fat greatly, is with him never accelerated by moving about, and, with plenty of feed, the sole burden of life is to digest it. This breed is pre-eminently among the black breeds, and excelled by none as fat producers.—*Am. Agriculturist.*

Swimming a Horse.

When swimming a horse, *never touch* the bridle as a horse is easily drowned when checked up or otherwise interfered with about the head. Sit well back and guide the horse with the hand, gently slapping him on either side as required; thus a horse will swim a mile or more with a full grown man on his back, and suffer but little. A still safer way on reaching deep water is for the rider to relieve the horse of his weight, by sliding into the water beside the horse, grasping the mane near the withers with one hand, thus requiring the horse simply to *tow* the rider, the latter assisting him in this, by using his legs and free arm in the same way as in swimming. In crossing rivers with rapid currents, the rider should take the down-stream side of the horse. I have seen this method practised by the Indians with much success.—*Cor. Country Gentleman.*

Cattle Food.

Experience teaches us that cattle thrive best on a mixed diet. All hay or all grain will produce less beef than hay and grain. The animal structure of the ox also demands bulk in food, as well as richness; the feeding of concentrated food being only profitable so far as the animal assimilates it—beyond that, of simply increasing the manure heap, at a cost far beyond its value. The ox has approximately eleven and one-half pounds of stomach with only two and one-half pounds of intestines, to each one hundred pounds of live weight; the sheep has less stomach and more intestines, giving a smaller percentage of digestive apparatus; while the pig for every one hundred pounds of live weight has only one and one-third pounds of stomach to six pounds of intestines. A steer would thrive on a bulk of straw, with a little oil meal, that would shrink a sheep and starve a pig. Pork can be produced from clear cornmeal, while mutton requires a greater variety of food, and beef cattle would become cloyed and diseased with its exclusive use. A thoughtful attention to these broad facts will change much injudicious feeding into cheaper meat production.—*Cultivator.*

Garget in Cows.

This is a common disease of dairying cows, occurring shortly after parturition, or maybe immediately before it, and attacking especially free milkers after their first gestation. In cows the womb and mammary glands receive their blood from the same large trunk vein. This may be a reason why the secretion of milk almost invariably becomes early and freely established in the cow; but it also renders the glands very liable to over-excitement and disease. The abundant flow of rich and stimulating blood, to the udder on the second or third day, and the active secretion of milk, usually lead to a certain amount of fever, with lassitude and restlessness, heat of mouth and diminution of appetite; and this may pass by an easy transition into sanguineous congestion or inflammation of the organ. If the milk is imperfectly drawn off, the condition will be fostered even though a certain amount is taken away; and a cow may soon be rendered all but useless through treatment of this kind at the hands of a dairymaid. The abundant supply of nutritive diet on the first few days after calving is a fruitful source of disease of the udder, as it is of the justly dreaded parturient milk fever.

Perhaps no condition is more favorable than that in which the calf is allowed to suck its dam; but even in these circumstances the udder may become congested. The calf may be too weak to abstract a sufficient quantity, or the dam may obstinately refuse to suckle the offspring or allow herself to be milked. A number of external causes may favor the development of congestion. Wounds, blows, bruises in lying; prolonged contact with cold pavement; or exposure in a draught of cold air, may act in this way. Sometimes the whole udder is affected, and sometimes one quarter only, but most frequently the two quarters on the same side are simultaneously attacked. The gland swells in a general and uniform manner; the skin covering it becomes tense and glistening; it acquires an elastic sensation and much tenderness. The swelling is not limited to the gland, but encroaches on surrounding parts as well, and frequently extends forward on the belly almost to the fore limbs. In some good milkers, after parturition, the last symptom is, however, quite consistent with perfect health. In a short time the swelling of the gland loses its uniformity, becomes knotty at certain points, and

acquires a soft and pasty feeling in place of its previous tense elasticity. The yielding nature of the swelling is readily distinguished from the fluctuation caused by the presence of matter or other liquid materials from the blood into the areolar tissue of the gland. Lameness is usually well marked; the hind limbs are kept apart and stretched backward, while in walking there is halting and inability to advance the leg on the affected side. When standing, the patient frequently lifts her weight from one hind foot to the other. The secretion of milk is also sometimes modified. It acquires a gray or yellow tint and a thin serous or glairy appearance, and it may be in part coagulated, in which case it is mixed with small grayish-white masses of curd. Fever may or may not exist. It is seldom very marked, unless the gland becomes actively inflamed, when we have a much more serious condition to contend with.

The treatment must be in part directed to obviate the irritation resulting from the excessive secretion of milk, and in part to counteract the congestion. In the milder cases a good hand-rubbing of the udder and due care to milk the animal clean, will attain both these ends. The rubbing may require to be repeated for several days before each milking; but by degrees the swelling is reduced and softened, the skin reassumes its normal color, and the tenderness disappears. The young animal acts in a similar way, withdrawing the milk, and at the same time subjecting the udder to an amount of friction which is in the highest degree beneficial. It will sometimes be advisable to seek to diminish the secretion of milk by putting the cow on a spare diet. It should be made a rule that cows, and especially such as are in prime condition, be kept on spare diet for at least a week before and after calving. Were this more generally acted on, the diseases occurring about the time of parturition would be much less numerous. Besides low diet, it may be needful to give some depletion agent, such as nitre (in ounce doses) or Epsom salts (to the extent of a pound), combined with a carminative, as ginger, caraway seeds, &c.

In more severe cases, frictions, with stimulating liniments, may still be employed, provided there is no active inflammation in the gland. For this purpose camphorated spirit of wine may be used, or liniment of ammonia. In all cases it is of the utmost importance to have all the milk removed by frequent milking. If the soreness of the teats prevents us from effecting this with the hand, teat tubes must be employed by a careful attendant. Above everything, draughts of cold air must be avoided, and if there is a tendency to coldness of the surface, the cow should be carefully clothed. It will sometimes be found necessary to use fomentations, poultices, &c., but these are rarely needed so long as the condition is only one of simple congestion.

The Outlook for Breeders of Short-horns.

Notwithstanding the prevalent distrust as to the financial future, the general stagnation of business, which is being felt all over the country, there has been no time within the past ten years when there was so general a demand for good, well-bred Short-horn bulls as at present. From all quarters our correspondents make this report, and they are men upon whose statements we can place implicit reliance. The fact is, the experience of the past ten years has educated the great mass of farmers up to a knowledge of the value of improved stock, and improved methods of agriculture, and now, when they keenly feel the effects of the financial depression, they must avail themselves of all that experience has taught them in order to make farming profitable. While more prosperous times were upon us, it mattered little whether the farmer kept good stock or poor, practiced the most economical methods of cultivation and feeding or the most wasteful, negligent and extravagant—everybody was getting along and it was no trouble to make ends meet. But now the case is different, and ignorant must go to the wall. Farmers generally begin to appreciate this fact, and they see that in raising better stock, practicing more intelligent methods of culture, and using better judgment in feeding, with rigid economy in domestic affairs, lie their own safety from bankruptcy.

Short-horn breeders may well take courage. The farmers of the whole country have learned to appreciate the merits of this matchless race of cattle, and they fully understand that the time has come when they can no longer afford to breed and feed scrubs. They must and will have Short-horns.

Breeding instead of Purchasing Cows.

No one will deny that one essential requisite to success in dairying is to have good cows for the business, and in considering how this is to be obtained it is evident the surest way would be to rely upon breeding animals upon the farm where they are to be used, rather than purchased at random from droves, providing a kind or race of animals can be obtained that will transmit desirable qualities or excellencies from generation to generation with reasonable certainty. Experience teaches us that we cannot rely on the common stock of the country to obtain from cultivated breeds which have been long bred in reference to special qualities, and have in consequence, established a fixed type in this regard. I think our dairymen need not look beyond four or five breeds of thoroughbred cattle for obtaining desirable results, namely the Short-horns, the Ayrshires, Devons, Alderneys, and the Dutch or Holstein Cattle. There are other breeds more or less famous in the districts where they originated; such as the Gallways, the Kerrys, the Herfords, the Bretons, the Swiss and other European varieties, some of them, at least, when transported from their native districts, have not given such satisfaction on the whole as the breeds I have named.—*Practical Dairy Husbandry.*

Keep the Lambs Growing.

Every breeder of experience knows that the animals reaching the highest types of perfection are those which get no "back sets" during their first season. To secure their thrift during the spring months, when the lambs are young—thus not requiring a large amount of nourishment, and when the fresh pasturage insures a constant and liberal flow of milk from the ewes—is comparatively easy; but to keep up the nutrition in the increased quantities demanded by the rapidly growing animal, when meadows and hill-sides begin to brown beneath the summer solstice, is often found to be a difficult problem. Unless the pasture is ample, even in the driest season, it should be divided so that the flock is not allowed to range over the whole of it at will. By dividing it into two or more lots, fresh feed can be had at such intervals as will be found beneficial. When it is necessary to fold the flock at night, care should be had to allow them access to grass pretty early in the morning, as, during the hottest days of summer, sheep will stand hungry in the shade of trees or fences rather than feed during the hottest portion of the day. There need be no hurry about getting them off the pasture in the evening; they will generally indicate it when ready to lie down for the night. When possible, their water supply should be near the shaded resting place—in fact, for steady and satisfactory thrift of a flock of lambs, let their surroundings be such as to insure the highest degree of comfort—a full belly, and protection from the extremes of weather.

Messrs. C. C. Chamberlain & Co., of Boston, in their circular of the 24th ult., make the following remarks with regard to packing butter. The same will apply equally well to Canadian packers:—

"As the season for grass butter approaches, a few suggestions in regard to packing it may prove beneficial to all interested. The style of the package has more to do with the sale than most shippers are aware of. In this market there is a decided preference for a neat Eastern-made white ash or spruce tub, netting from 50 to 60 lbs., and it always sells the readiest. The tubs should be well soaked in brine before filling, the butter packed solidly, and filled within a quarter of an inch of the top of the tub. Cover the top with a piece of clean, new, bleached cotton cloth, soaked in brine, and tucked neatly down at the edge. In packing and getting it ready for market, neatness is indispensable, and besides that, it pays. Never pack two colors in the same package. Light colored or streaked butter always sells hard and at low prices. Use Ashton's fine salt, or the next best you can get. Tare your tubs correctly and allow for one pound soakage, as it saves trouble all around, the time having gone by when wood, salt and pickle can be sold as butter.

Analysis gives the nutritive value of corn to be compared with that of oats, as 70 is to 60. An average of several tables takes the value of a given quantity of oats to represent 100 while the value of the same quantity of corn would be 95. For feeding to young and growing animals, corn is less suited than oats, and the difference between the value is greater.

A correspondent of the *Rural World* uses a medicine for the cure of slobbers in horses that, though infallible, is not popular because it is so simple, handy and cheap. A dose or two of from one to two gallons of dry wheat bran has never failed with him.

HORSE FOOD.—Of the different kinds of grain, oats is peculiarly the horse's food; always safe, digestible and nutritive. Barley is the best substitute for it. Wheat and Indian corn are sometimes given, but both are unsuitable; the first is too concentrated, and the last is too heating. They ought to be sparingly used, and only when ground and mixed with chaff. The offal of wheat is never objectionable. Grain is always more advantageously fed when ground or crushed, and wet some time previous to eating; and it is still better when cooked. On both sides of the Mediterranean, in the Barbary States, in Spain, France and Italy, much of the food is given in small baked cakes; and the saving in this way is much greater than the expense of preparing it.—*Stock Journal.*

Simple Method for Tanning a Lamb-skin with the Wool On.

Make a strong soap-suds, using hot water; when it is cold, wash the skin in it, carefully squeezing it between the hands to get the dirt out of the wool; then wash the soap out with clean, cold water; next, dissolve alum and salt, of each half a pound in a lot of hot water, which put into a tub of cold weather, sufficient to cover the skin, and let it soak in it over night or twelve hours; now hang the skin over a pole to drain; when well drained, spread or stretch carefully on a board to dry. It need not be tacked if drawn out several times with the hand while drying. When yet a little damp, sprinkle pulverized saltpetre and alum (an ounce each mixed together) on the flesh side, rubbing it in well. It is now to hang in the shade for two or three days, the flesh side in until perfectly dry. When entirely dry, scrape the flesh side with a blunt knife to remove any scraps of flesh. Trim off all projecting points, and rub the flesh side with pumice or rotten stone, and with the hands. Prepared in this way, it is white and beautiful, suitable for a door-mat, and also nice for the feet in a sleigh or wagon in cold weather.

Sure Death to the Currant Worm.

The destruction of currant bushes for years past by worms has been the means of enhancing the price of that very valuable fruit in most markets, while with a little care it can be cheaply protected. It is a well-known fact that white hellebore is sure death to the currant worm, but at the same time many will not try it, while others apply it in such a way that it is soon washed off by rains, or only touches the tops and outside leaves, leaving the inside of the bunch of bushes for the worm to feed upon. The whole secret is to apply it on the under side of the leaves, where the worm fastens to eat. To do this I take a piece of cotton cloth that the powder will shake through sparingly, about 10 inches square; put in about 4 ounces of the powder, and gather it up around the end of a stick about 3 feet long, and tie it on, making a sort of bag at the end. I then make the application in the morning before the dew is off by opening the bunch of bushes and putting the bag end down nearly to the bottom and shake it, the current of air is then upward, and the leaves being damp, the powder sticks on the under side. If the current of air is a little sideways, shake low on the wind side on the outside of the bunch of bushes. It is not best to wait the appearance of the worm, but doctor the bushes as soon as the blossoms are well developed and the leaves are half or two-thirds grown, and again after the fruit has fairly set. This will usually do the work for the season. The main point is to rightly apply the hellebore, and with these hints and a careful attention, and the use of a little judgment, the currant bush can be preserved.

Steam has been successfully used on the street railroads in London. The machinery, which has been patented by Mr. John Grantham, a member of the Institute of Civil Engineers, is quite hidden from view. There is, in fact, nothing to indicate its presence except a small funnel in the middle of the roof. There is no heat felt, no noise heard, and stoppages are effected more readily than with horses.

The Story.

How Percy Bingham Caught His Trout

One lovely evening toward the end of the month of June, 1877, an outside car jingled into the pretty little village of Ballynacushla. The sun had set in a flood of golden glory; purple shadows wooed midsummer-night dreams on crested hill and in hooded hollow; a perfumed stillness slept upon the tranquil waters of the Killeries, that wild but beautiful child of the Atlantic, broken only by the shrill note of the curlew seeking its billow-rocked nest, or the tinkle of the sheep bell on the heather-clad heights of Carrignagollogue. Lights like truant stars commenced to twinkle in lonely dwellings perched like eyries in the mountain clefts, and night prepared to don her lightest mourning in memory of the departed day.

The rickety vehicle which broke upon the stillness was occupied by two persons—a handsome, aristocratic-looking young man attired in a fashionable tourist costume, and the driver, whose general "get up" would have won the heart of Mr. Boucault at a single glance.

"That's a nate finish, yer honor," he exclaimed, as bringing a wheel into collision with a huge boulder which laid in the roadway, he decanted the traveler upon the steps of the "Bodkin-Arms," at the imminent risk of breaking his neck.

The "Bodkin Arms," conscious of its whitewash and glowing amber thatch, stood proudly isolated. Its proprietor had been "own man" to Lord Clarinard, and scandal whispered that a portion of the contents of "the lord's" cellar was to be found in Tom Burke's snuggery, behind the bottle-bristling bar.

The occupant of the car was flung into the arms of an expectant waiter, who, true to the instincts of that remarkable race, had scented his prey from afar, and calmly awaited its approach. This Ganymede was attired in a cast-off evening dress-coat frescoed in grease; a shirt-bearing traces of the despairing grasp of a frantic washerwoman; a neck-tie of the dimensions of a window curtain, of faded brocade; and waist-coat with continuations of new corduroy, which wheezed and chirruped with every motion of his lanky frame. His nose and hair vied in richness of ruby, and his eyes mutely implored every object upon which they rested for a sleep—or a drink.

"You got my note?" said the traveler, interrogatively.

"Yes, Sir, of course, Sir." Of course they had it. The post in the west of Ireland is an eccentric institution, which disgorges letters just as it suits itself, and without any particular scruples as to dates.

Have you a table d'hote here?"

This was a strange sound, but the waiter was a bold man.

"Yes, Sir, of course, Sir! Would you like it hot, Sir?"

"Hot! Certainly."

"Yes, Sir, of course, Sir! With a taste of lemon in it?"

"I said—Pshaw! Is dinner ready?" said the traveller, impatiently.

"Yes, Sir, of course, Sir; it's on the fire, Sir," joyously responded the relieved servant, although the fowls which were to furnish it were engaged in picking up a precarious subsistence at his very feet, and the cabbage to "poutice" the bacon flabbily flourished in the adjoining garden.

"Get in my traps and rods"—the car was laden with fishing tackle of the most elaborate description. "Have you good fishing here?"

"Yes, Sir, of course, Sir—the finest in Ireland. Trouts leppin' into the fryin'-pan out of the lake forinst ye. The Marquis took twoscore between where yer standin' and Fin Ma Coole's Rock last Thursday; and Mr. Blake of Town Hill—more power to him!—hooked six elegant salmon in the pool over under Kilgobbin Head."

"I want change of a sovereign."

"Yes, Sir, of course, Sir—change for a hundred pound, Sir. This way, Sir. Mind yer head in regard of that fitch of bacon. It gave Capt. Burke a black eye on Friday, and the county inspector got a wallop in the jaw that made his teeth ring like the bell in the middle o' Mass." And he led the way into the hotel.

The charioteer, after a prolonged and exciting chase through several interstices in his outer garment, succeeded in fishing up a weather-beaten black pipe, which he proceeded to "ready," with a care and gravity befitting the operation.

"Have ye got a taste o' fire, Lanty Kerrigan?" addressing a diminutive personage, the remains of whose swallow-tailed frieze coat were connected with his frame through the medium of a hay rope, and whose general appearance bore a stronger resemblance to that of a scarecrow than a man and a brother.

"I'm lost entirely for a shough. The forinner (the stranger) wudn't stand smokin', as he said the tobacco was infayrior, but never an offer he med me at better."

"How'd a minnit, an' I'll get ye a hot sod." And in less than the time specified Lanty returned with a glowing sod of turf snatched from a neighboring fire.

"More power, Lanty!" exclaimed the car driver, proceeding to utilize the burning brand. "Don't stand too nigh the baste, avic, or she'll be after aittin' yer waistband, an' lavin' ye in yer buff."

"What soart av a fare have ye, Misher Malone?" asked Lanty, now at a respectful distance from the mare.

"Wan av th' army—course o' Crummie an' thim!—from the barrick beyant at Westport."

"Is it a good tack?"

"I've no doubts," shaking his head gravely, and taking several wicked whiffs of his dhudheen. "He's rather axin' for change, an' that luks like a naygur."

"Thruve for ye, Misher Malone! Did ye rouse him at all?" asked the other in an anxious tone. He expected the return of the "forinner," and was taking surroundings.

"Rouse him! Begorra, ye might as well be endayvorin' to rouse a griddle. I'm heart-scalded wud him. I soothered him wud stories av the good people, leprechauns, an' banshees until I was as dhray as a cuckoo."

"Musha, thim, he must be only fit for wakin' whin you couldn't rouse him, Mickey Malone."

"I'd as levee have a sack o' pitatoes on me car as—" He stopped short and plunged the pipe into his pocket, as the object of the discussion suddenly appeared upon the steps.

"Here's a sovereign for the car and half a sovereign for yourself," exclaimed the young officer, tossing the coins to the expectant Malone.

"Shure you won't forget the little mare, Captain?"

"Forget her?" Not likely, or you either, Patsey."

"Ye'll throw her a half crown for to dhrink yer health, Major?"

"Drink my health? What do mean?"

"Begorra, she'd take a glass o' sperrits wud a gauger, Curuil; an' if she wudn't I wud. Me an' her is wan, an' I've decent manners on my side, so I'll drink yer honner's health, an' that ye may never die till yer fit."

"That sentiment is worth the money," laughed the traveler, tossing the half-crown into the air, and disappearing into the hotel.

"Well, be the mortal frost, Misher Malone," cried Lanty Kerrigan in an enthusiastic burst of admiration, "but yer the shupayrioriest man in Connemara."

Percy Bingham, of the 4th regiment of the Line, found Westport even more dreary than the Carragh of Kildare. From the latter he could run up to Dublin in the evening and return the next morning for parade, even if he had to turn into bed afterward; from Westport there was nothing to be done but the smit of Croagh Patrick or a risky cruise among the three hundred little islands dotting Clew Bay.

"Lasctate ogni speranza voi ch'entrate" was written upon the entrance to the town. All was dreariness, dullness and desolation, empty quays, ruined warehouses, and squalid misery. The gentry, with few exceptions, were absentees, and those whom interest or necessity detained in the country spent "the season" in London or Dublin, returning with weary hearts and empty pockets, to the exile of their homes, there to vegetate until Spring and the March rents, wrung from an oppressed tenantry, would enable them to fit citywards once more.

To Bingham, to whom London was the capital of the world, and the United Service Club the capital of London, this phase in his military career was a horrid nightmare. Born and bred an Englishman, he had been educated to regard Ireland as little better than a Fiji Island, and considerably worse than a West African station; and, filled to the brim with Saxon prejudice, he took up his Irish quarters with mingled feelings of disgust and despair.

An ardent disciple of Isak Walton, he clung to the safety-valve of rod and reel, avenging his exclusion from Mayfair and Belgrave by a wicked raid upon every trout-stream within a ten-mile radius of the barracks, and having obtained a few days' leave of absence, arrived at Ballynacushla for the purpose of "wetting his line" in the saucy little rivers that joyously leap into the placid bosom of the land-locked Killeries.

"So my dinner is ready at last," exclaimed Bingham, pettishly. A good digestion had waited two mortals hours on appetite.

"Yes, Sir, of course, Sir!" replied the waiter. "A little derangement of the cabbage, Sir, lost a few minutes, but—cheerily—we're safe and snug now anyway. There's darling chickens, Sir! Look at the lovely bacon, Sir! Survey the proportions of that cabbage, Sir!" And rubbing his napkin across his perspiring brow, he gazed at the viands, and from the viands to the guest, in alternate glances of admiration and respect.

"Have you a carte?"

"Yes, Sir, of course, Sir—two of them; likewise a shay and a covered car."

"A wine carte, I mean."

"No, Sir; we get the wine from Dublin in hampers."

Percy Bingham forgot that he was not in an English inn where the waiters discuss vintages, and prescribe peculiar brands of dry champagne.

"What wines have you?"

"We've port wine, Sir, and sherry wine, Sir, and claret wine, Sir, and Maydral wine, Sir," was the reply, "run off with the utmost rapidity."

"Give me a bottle of sherry."

"Yes, Sir, of course, Sir."

In a few minutes the gory-headed factotum returned with the wine, and uncorking it with a tremendous flourish of arm, napkin, head, and hair, deliberately poured out an overflowing glassful of the amber-colored fluid, and drained it off.

"What the mischief do you mean?" demanded the young officer angrily.

"I wanted for to make certain that yer honor was gettin' the right wine."

And placing the bottle at Percy Bingham's elbow, he somewhat hastily withdrew.

The gallant warrior fully enjoyed his chicken and bacon and "wisp of cabbage." The waiter had made his peace by concocting with cunning hand a tumbler of whiskey punch, hot, strong, and sweet, which Bingham proceeded to sip between the whiffs of a Sabeian-odored Lopez. Who fails to build castles upon the creamy smoke as it fades imperceptibly into space, waiting upward aspirations, wishes, hopes, dreams—rare and roscate shadows, begotten of bright-eyed fancy? Not Percy Bingham, surely, seated by the open casement, lulled by the murmuring splash of the loyng tide, gazing forth into the silent sadness of the gray-hooded summer night. He had lived a butterfly life, and his thoughts were of gay parterres and brilliant flowers.

"Of hair-breadth 'scapes" the imminent deadly breach" he knew nothing. His game of war was played in the boudoir and drawing-room; his castle was built in May Fair, his chateleine an ideal. The chain of his meditation was somewhat rudely snapped asunder by an animated dialogue which had commenced in some remote region of the hotel, and which was now being continued beneath the window whereat he reclined. The waiter had evidently been engaged in expostulating with Lanty Kerrigan.

"Don't run yer head off against a stone wall, Lanty, avic. Be off to Knockshin, and don't let the grass grow under yer feet!"

"Faix, it's little ould Joyce would think av my foot; it's me back he'd be lukkin' for, an' a slip of a stick. Sorra a step I'll go."

"Miss Mary must get her parcel anyhow."

"Thin let her send for it, av she's in such a hurry."

"An' so she did. Get a hind of a horse, Lanty."

"Sorra a horse there's in the place, barrin' an ass."

"Wirra! wirra! she'll take the thatch off the roof; the blood of the Joyces is cruel hot."

"Hot or cold, I'm not goin' three miles across the bogs."

"You could coax it into two be manes of a sup, Lanty."

"Sorra a coax, thim. Coax it yerself sence yer so anaisy."

"What's the row?" asked Percy Bingham from the window.

"It's in regard to a parcel for Miss Joyce, yer honor," replied Lanty, stepping forward.

"And who is Miss Joyce?" said Percy, intensely amused.

"O! mother of Moses! he doesn't know the beautifullest craythur in the intire country," exclaimed Lanty, hastily adding: "She's the faymale daughter of ould Miles Joyce of Knockshin beyant, wan av the rale ould anshient families that kep up Connemara sence the times av Julius Sayzar."

"And you have a parcel for her?"

"Troth, thin, I hev, bad cess to it! It kep up Lough Corrib, an' round the Cong, instead av takin' the car to Clifden, all the ways from Dublin, in a box as big as a turf creel. It's a gownd—no less—for a great party tonight; an' begorra, while it's lyin' here they're goin' to tay in Frinchpark."

"It's too bad," thought Bingham, "so have the poor girl sold on account of the laziness of this idle rascal. Her heart may be set upon this dress. A new ball dress is an epoch in a young girl's existence, and a ball dress in this out-of-the-way place is a fairy gift. Hinc illa lacryma! How many hopes cruelly blasted, how many anticipated victories turned into humiliating defeat! If it were not so late—By Jove! it shall not be." And yielding to a sudden impulse, Percy Bingham ordered Kerrigan to start for Knockshin.

"It's five mile, yer honor, an'—"

"There's sixpence a mile for you. Go!"

And in another instant the parcel-laden Lanty had taken to the bog like a snipe.

Percy Bingham attacked his breakfast upon the following morning with a gusto hitherto unknown to him. "I wonder did that girl"—he had forgotten her name—"get the dress in time? I hope so. How fresh these eggs are! I wonder if she's as pretty as that ragamuffin described her? These salmon cutlets are perfection. I must have a look at her, at all events. 'Fon my life! those kidneys are devoted to a grain of pepper. This ought to be a good trout day. One more rashor. By George! if the colonel saw me perform this breakfast, he'd make me exchange into the heavens."

Lighting a cigar, and seating himself upon a granite boulder by the edge of the inlet, the purple mountains shutting him in from the world, he proceeded to assort his flies and "put up" his casts.

"Musha, but yer honor has the hight av decoys!" observed Lanty Kerrigan, touching the dilapidated brim of his caubeen, and seating himself beside him. There is a masonry among the gentle craft which levels rank, and "a big fish" will bring peer and peasant cheek by jowl on terms of the most familiar intercourse.

"Yes, that's a good book," said Percy, with a justifiable pride in his tone. The colors of the rainbow, the ornithology of the habitable globe, were represented within its parchment folds. "This ought to be a good day, Lanty."

"Shure enough," looking up at the sky. "More betoken, I seen Finnegan's throat as I came across the steppin'-stones there below."

"Finnegan's trout! What sort of a trout is that?" asked the officer.

"Pether Finnegan was a great fisher in these parts, yer honor. Nothin' end bate m. He'd ketch a fish as shure as he wetted a line, an' no matter how cute or cunning, he'd hev them out of the water before they cud cry murther. But there was wan ould trout av shupayrior knowledge that was well fed on the hight av wurrums an' flies, an' he knew Pether Finnegan, an' begorra, Pether knew him. They used to stand forinst wan another for days an' days, Pether flap-pin' the wather, an' th' ould trout flap-pin' his tail. 'I'll hev ye, me man,' said Pether. 'I'll hev ye ev I was to ketch ye in my arms like a new-born babe, sez he. 'I never was bet be a man yet, an' be the mortal I'm not goin' to be bet be a fish.' So he ups, yer honor, an' puttin' a couple of quarts of wisky in his pockets for to keep up his heart, he ups an' begins for to fish in earnest an' for the bare life. First he thried flies, an' thin he thried wurrums, an' thin he thried all sorts of combustibles; but th' ould trout turned up his nose at the entirety, an' Pether seen him colleaguerrin' wud the other trouts, and puttin' his comether on thim for to take it aisy an' lave Pether's decoys alone. Well, sir, Pether Finnegan was a hot man an' aisy riz,—the heavens be his bed—an' thin he seen the conspiracy for to defraud him an' the young throuns laughin' at him, he bled over like a little, an' shoutin', 'I'll spile yer divarshun,' ned a dart into the river. His body was got, the bottles was safe in his pockets, but, be the mortal frost, th' ould trout got at the wisky an' dhrunk it every dhrup."

"I must endeavor to catch him," laughed Percy Bingham.

"Ketch him!" exclaimed Lanty indignantly. "Wihha, you wudent ketch him, nor all the fusileers an' bombardiers in th' army wudent ketch him, nor th' ould boy himself—the Lord be betune us an' harrum! wudent ketch him. He's as cute as the say-sarpent, or the whale that swalled Juno."

"What do the fish take best here?" asked Bingham, whose preparations were nearly completed, his rod being set up, an' festoons of casting-lines encircling his white felt hat.

"Wurrums is choice ather a flood; dough is supayrior whin they're leppin' lively; but av all the baits that ever consaled a hook, there's none equal to corhal—it's the choicest decoy goin'. A trout wud make a grab at a corhal av the rattles was in his throat an' a pike grippin' him be the tail."

Lanty Kerrigan was told off as cicerone, guide, philosopher and friend.

"I suppose I'm safe in fishing these rivers. No bluff or hindrance?" asked Percy Bingham of the landlord of the "Bodkin Arms."

"There's no wan to hinder ye, Sir; so a good take to ye," was the reply. "I hope ye wont come across ould Miles Joyce, for if ye do there'll be wigs on the green," he added under his breath as he turned into the bar.

"A cook it was her station."

The first in the Irish nation, wud carvin' blade she'd slash away to the company's admiration."

sang Lanty Kerrigan, prolonging the last syllable—a custom with his class into a kind of wail, as he merrily led the way through a narrow mountain pass, inaccessible save to pedestrians, in the direction of the fishing-ground. It was a somber morning. Nature was in a meditative mood, and forbade the prying glances of the sun. The white mists hung like bridal veils over hill and dale, mellowing the dark green of the pine trees and the blue of the distant Atlantic, occasionally visible as they pursued their zigzag, upward course. A light breeze—the "angler's luck"—gently fanned the cheek, and the sprouting gorse and tender ferns were telling their rosaries on glittering beads of diamond dew.

[TO BE CONTINUED.]

Minnie May's Department.

MY DEAR NIECES.—I am going to give you a few hints on bread making, which should stand at the head of domestic accomplishments, since the health and happiness of the family depend incalculably upon bread, "the staff of life." Therefore, undoubtedly, you all strive to excel in that duty. There are many different modes of making bread, each of which requires great attention and care. Yeast bread is considered the standard bread, and is perhaps more generally found on every table than any other. Hence it is important to know how to make good, sweet yeast bread. Good flour is the first indispensable; then good, lively yeast, either yeast cakes or bottled. The following is the recipe by which the celebrated Vienna bread was made, that became so famous on the Centennial grounds for its deliciousness:—

Sift in a tin pan four pounds of flour, bank it up against the sides, pour in one quart of milk and water, and mix into it enough flour to form a thin batter; then quickly and lightly add one pint of milk, in which is dissolved one ounce of salt and one and three-quarter ounces of yeast; leave the remainder of the flour against the sides of the pan; cover the pan with a cloth and set in a place free from draught for three-quarters of an hour; then mix in the rest of the flour until the dough will leave the bottom and sides of the pan, and let it stand two and a half hours. Finally, divide the mass into one pound pieces, to be cut in turn into twelve parts each. This gives square pieces about three and a half inches thick, each corner of which is taken up and folded over to the centre, and then the cases are turned over on a dough-board to rise for half an hour, when they are put into a hot oven that bakes them in ten minutes.

The ingredients may be divided into smaller proportions, so that a single one-pound loaf could be baked as well as four one-pound loaves.

MINNIE MAY.

RECIPES.

MY DEAR MINNIE MAY,—I have a good recipe to offer for the benefit of those interested in your worthy department. It was sent to my mother to relieve her agony while suffering with a carbuncle on the back of her neck, and afforded her wonderful relief. For boils, and sores of almost any kind, it will be found of great service:—

Tallow, 1 lb.; linseed oil, 1 lb.; beeswax, $\frac{1}{2}$ lb.; Burgundy pitch, 4 oz.; Venice turpentine, 4 oz.; resin, $\frac{1}{2}$ lb.; oil of lavender, 2 oz. Mix all together and simmer over the fire for about twenty minutes. As this makes a large quantity, one-half of the above ingredients may be taken. I consider this recipe alone worth many times the price.

Yours affectionately, MYRA.

TRANSPARENT PUDDING.

Beat the yolks of eight eggs and the whites of two, and mix with them half a pound of warmed butter and the same of loaf sugar, pounded; butter cups or moulds, lay at the bottom orange marmalade or preserved apricots, pour the pudding upon the sweetmeats and bake from fifteen to twenty minutes. This is very rich, and should not be eaten by those having weak stomachs.

ARROW-ROOT PUDDING.

Dissolve four teacupfuls of arrow-root in a quart of fresh milk, boil with a few bitter almonds, pounded up, or peach leaves to give it a flavor, if you wish; stir it well while it is boiling, or until it becomes a smooth batter; when quite cool, add six eggs, well beaten, to the batter, then mix with it a quarter of a pound of powdered sugar (if brown is used it spoils the color); grate some lemon peel into the mixture, and add a little of the juice. The pudding should be baked an hour, and sent to the table cold.

KENTUCKY POTATOES.

Take raw potatoes; pare and slice very thin; place them in a pudding dish; cover well with milk; add pepper and salt, and bake until nicely browned; do not put them in water after they have been sliced.

WASHING VEGETABLES.

Vegetables should never be washed until immediately before prepared for the table. Lettuce is made almost worthless in flavor by dipping it in water some hours before it is served. Potatoes suffer even more than other vegetables through the washing process. They should not be put in water till just ready for boiling.

WASHING COLORED FABRICS.

Before washing almost any colored fabrics, soak them in water, to each gallon of which a spoonful of oxgall has been added. A teacupful of lye in a pail of water is said to improve the color of black goods. A strong tea of common hay will improve the color of French linens.

STAIR CARPETS.

Stair carpets should always have three or four thicknesses of paper put under them, at or over the edge of every stair, which is the part where they first wear out. The strips should be within an inch or two as long as the carpet is wide, and about four or five inches in breadth. This simple plan, so easy of execution, will, we know, preserve a stair carpet half as long again as it would last without the strips of paper.

DEAR MINNIE MAY,—You will confer a kind favor by publishing the following, for the good it may do. I have been a terrible sufferer from corns, but am happy to say, by using the following recipe, I have cured them:—

Take some small bits of beefsteak, soak in strong vinegar through the day, and bind a piece on each corn at night, drawing a stocking on to keep them in place. The same pieces of beef can be used the next night. A week or ten days is sufficient to remove any ordinary corn.

Your niece,
JANE GREY.

DEAR MINNIE MAY,—Though I have seen many valuable recipes in your column of the *Advocate*, I failed to find one which I am very anxious to get—ammonia jelly cake. Your attention to this will much oblige.

LIZZIE DAFFRON.

[Can any of my nieces furnish one?—M. M.]

TO TAKE RUST OUT OF STEEL.

If possible, place the article in a bowl containing kerosene oil, or wrap the steel up in a soft cloth well saturated with kerosene; let it remain 24 hours or longer; then scour the rusty spots with brick dust; if badly rusted, use salt wet with hot vinegar; after scouring, rinse every particle of brick dust or salt off with boiling hot water; dry thoroughly with flannel cloths, and place near the fire to make sure; then polish off with a clean flannel cloth and a little sweet oil.

TO CLEANSE THE WOODWORK AROUND DOORS.

Take a pail of hot water; throw in two table-spoonfuls of pulverized borax; use a good, coarse house cloth—an old coarse towel does splendidly—and wash the painting; do not use a brush; when washing places that are extra yellow and stained, soap the cloth; then sprinkle it with the dry powdered borax, and rub the places well, using plenty of rinsing water; by washing the woodwork in this way you will not remove the paint, and the borax will soften and make the hands white—a fact well worth knowing.

STAINS.

Propos of the paragraph that appeared in this department not long since, about removing stains from a green rep sofa, a lady writes:—

"My niece had a black velvet sack, one sleeve of which was turned a royal purple by a bottle of wine being spilled on it. Holding it over the steam of carbonate of ammonia restored the color entirely."

TO CURE A FELON.

As soon as the felon can be located, place over the spot a Spanish-fly blister, the size of a silver five cent piece. Let it remain from six to eight hours, at the end of which time the felon will be found just beneath the skin, and can easily be removed with the point of a needle.

CARE OF FRUIT CANS.

All fruit cans should receive immediate attention as soon as they are emptied, and should be emptied as soon as opened. They should be carefully cleansed, dried, and then put away in a dry place until wanted for future use. In no other way can they be made to last well and long. Never put your canned fruit in a cool, damp place, but always in a dark, dry place; if such place is cool,

so much the better; if not, it is better than in a damp place. Cans that have been properly cared for will last a series of years, good as new, especially tin ones, and these I prefer to put apples, pears, peaches, strawberries and tomatoes in. A high swing shelf, in a dry cellar that has plenty of air, is a good place for tin cans when filled. A dark cupboard is better for glass jars, when filled, as light is injurious in its action on glass. To open cans sealed with wax, dip the end fastened with wax into hot water, and soon the cover of the can may be removed with ease; remove all the wax from the can, and cover so that it may not get mixed with the fruit, and so spoil the flavor.

MOTHS.

This is the period when moths begin to fly, and those who have not packed away winter garments and furs should lose no time in doing so. Beat the articles thoroughly, and expose them to bright sunlight and air for several hours. Seal them up in tight paper cases, or put them away in close trunks, with plenty of gum camphor, pepper, tobacco, chips of Russia leather, or cedar dust.

Sour Milk and Soda.

I presume I can say nothing under this head that has not been said before in these columns. But I perceive that there are experienced housekeepers who have yet to learn how to use soda with sour milk. A woman of double my experience told me, not long ago, that she had now got so that she could make sour milk biscuit that her folks would eat. Now she mashed the soda and mixed it with the flour, then stirred in the sour milk or butter-milk. Before this she "puts the soda in a cup," but the biscuits were always streaked and spotted. This would not happen, I am sure, if the right quantity of soda was taken, and if the soda was carefully dissolved in water, either warm or cold, stirred quickly and thoroughly into the sour milk, and rapidly beaten up with the flour.

In giving directions to another, I think I should advise a thorough incorporation of the soda with the flour, after both soda and sour milk have been exactly measured. For then the effervescence (or foaming) would all take place in the dough, the gas would raise the flour, and the mass would surely be light. A careless cook will perhaps mix her sour milk and soda together, and while it is foaming and settling again to quiet, she is perhaps getting her flour and hunting up her rolling pin, and of course she doesn't "have good luck" with her biscuit. If she would get everything ready, even the buttered tins, and then measure out a level teaspoonful of soda for each teacupful of sour milk, or a rounding teaspoonful for each pint, then dissolve entirely the soda in a cup by itself, and stirring it quickly into her sour milk or butter-milk, (sour of course), pour the whole into the flour before the foaming fairly begins, and work it together quickly—there would be no streaks and no heaviness. But the best thing to do with baking soda, is to avoid its use as far as possible, for accurate measurement is impossible so long as there are varying degrees of sourness in milk, and different sized spoons and cups; and good things, and plenty of them, can be made without any soda.

How to Keep Prints Nice.

After all there is nothing so nice for household wear as calico. And now, when prints are so cheap, there is no excuse for wearing dirty, slatternly looking dresses at home or abroad, for a nicely done up calico is far preferable for any occasion, to a shabby worsted. Many think a calico dress is only fit to be seen before it has been washed, but with a little pains they may be kept looking nicely for a long time. Washed carelessly, starched stiffly, sunned a day or two, and half ironed, it is not a very comely sight. But if quickly dried in the shade, very thinly and evenly starched and ironed on the wrong side, so that it will not shine, it will look like a new dress for a long time. Calicoes should never be allowed to soak in the suds in washing. They should be sorted over as carefully as are white clothes, the lighter pieces put into clean, soft water, one at a time, and washed out and thrown directly into a tub of clean, cold water, soft if possible. A little salt in the water helps to set the colors. They should then be rinsed again in clear water, starched, and hung where they will dry quickly, in the shade, and with the wrong side to the light. This to prevent fading, and that if any streaking from the running of the colors appears, it may be on the wrong side. Salt will nearly always set blue so that it will not fade. For pink, reds and greens

ter than in a properly cared as new, es- o put apples,atoes in. A has plenty of en filled. A when filled, ass. To open fastened with er of the can all the wax may not get b flavor.

n to fly, and ater garments so. Beat the em to bright Seal them up away in close ; pepper, to- lar dust.

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er this head ese columns. ienced house- use soda with y experience ow got so that hat her folks ada and mixed our milk or the soda in a streaked and I am sure, if on, and if the ; either warm ghly into the h the flour. hink I should he soda with ilk have been rvescense (or ough, the gas ould surely haps mix her hile it is foams' s perhaps get- lling pin, and uck" with her g ready, even re out a level l of sour milk, pint, then dis- self, and stir- r butter-milk, o the flour be- d work it to- streaks and o do with bak- s possible, for le so long as s in milk, and d good things, out any soda.

Nice.

for household prints are so ng dirty, slat- abroad, for a ole for any oc- think a calico e it has been may be kept hed carelessly, two, and half ight. But if uly and evenly ide, so that it ew dress for a e allowed to ey should be e clothes, the water, one at a directly into a ible. A little colors. They ater, starched, ickly, in the e light. This streaking from it may be on lways set blue eds and greens

a little vinegar in the water is best. To keep black calicoes from getting rusty, wash them the first time in very hot soap-suds in which white clothes have been boiled; it should be strained, as, indeed, such suds always should be if used for colored clothes, to get out the lint. Never rinse calicoes in the water in which white clothes have been rinsed, if not unavoidable. For very light prints clear starch is best, the cheaper kinds answering every purpose. For dark goods, flour starch is as good, but there is a great knack in making it nicely. I have my boiling water in the starch pan on the stove, stir flour smoothly with cold water to a thin paste, and then add gradually to the boiling water, stirring as I add, so that there may not be a lump in it. Boil a few moments and add a tablespoonful of salt and one of kerosene to each gallon of starch. A nicer but more tedious way is to wash flour that has been moistened to a dough, in cold water, which will leave the dough without any starch in it, and then boil the starchy water and use as before. In ironing very narrow ruffles on aprons, etc., I always iron them down flat, and then at my leisure, flute them on my finger. It is less work and they look well. Calicoes should not be dampened more than an hour before ironing, as it not only may make the colors run, but takes out the starch. White clothes iron much easier to lay damp over night; it pays to fold them smoothly.

A Mother's Love.

WHAT is there on the face of this wide earth like a mother's love—so unselfish, so full of devotion, so forgiving and so true? We have no other loves but what are exacting. The love of a brother, sister, husband or friend, expects more or less attention and reciprocation of affection; but a mother asks not for recompense, seeks no praise. All through our infancy she guards and guides us, and through our childhood up to maturer years, even after we have left her side and strayed from her blessed teaching and advice, her heart still goes out to us, and prays for us that we may be useful and honorable, and that our footsteps may never go astray.

What is there that will touch one's heart like a mother's love, so tender and so enduring? A man who forsakes virtue, who leads a reckless, unscrupulous life, is sometimes called back from the depths of degradation by the memory of a mother's love, a mother's prayer, or some recollection of his innocent boyhood, when a mother's influence cast a halo over all. That mother may not dwell among the living, but in the "secret places of the Most High" her love and care may still extend to us, may still smooth our pathway and help to chasten our hearts with kindness toward one another.

I have often thought that when my work on earth is ended, when I lay down my burden and have been rewarded for the good I have done, however small it may have been, no joy could seem holier or purer than the consciousness that I had smoothed my mother's road through life, and striven to repay the debt I owed her. Oh! could I but impress it on the minds of children to be kind to their mothers and solicitous about their comfort, how many care-worn hearts and silver hairs would go down in happiness to the grave! Blind and deaf to all duties of conscience must they be who would carelessly wound a mother's loving heart.

GOOD NATURE.—One cannot imagine any quality of the human mind whence greater advantages can arise to society than good nature, seeing that man is a social being, not made for solitude, but conversation. Good nature not only lessens the sorrows of life, but increases its comforts. It is more agreeable than beauty, or even wit. It gives a pleasing expression to the countenance, and induces a multitude of the most amiable observations. It is indeed the origin of all society. Were it not for good nature, men could not exist together, nor hold intercourse with one another. Good nature is an aptitude of the mind, on which objects act in an explicable way, and which discovers itself in universal benevolence to the whole creation. In it lies the foundation of all generous feeling to our neighbors, and sympathy with every member of the human family. It is a portion of that love which is the attraction of the mental universe. It possesses a power, the progression of which will gradually banish slavery, tyranny, war, disease, and vice, from the vital world, and unite mankind in one great brotherhood.

The Farmer's Wife.

Oh! give me the life of a farmer's wife,
In the fields and woods so bright,
Mong the singing birds and the lowly herds,
And the clover blossoms white.
The note of the morning's heavenward lark
Is the music sweet to me;
And the dewy flowers in the early hours,
The gems I love to see!

Oh! give me the breeze from the waving trees,
The murmur of summer leaves;
And the swallow's song as he swims along,
Or twitters beneath the eaves;
The plowman's shout as he's turning out
His team at set of sun;
Or his merry 'good-night,' by the fire-fly's light,
When his daily work is done.

And give me the roset and the luscious fruit
My own hands rear for food;
And the bread so light, and the honey so white,
And the milk so pure and good;
For sweet the bread of labor is,
When the heart is strong and true,
And blessings will come to the hearth and home,
If our best we bravely do.

The Hen and the Honey Bee.

AN APOLOGUE—FROM THE GERMAN OF GELLETT.

A lazy Hen—the story goes—
Loquacious, pert and self-conceited,
Espied a Bee upon a rose,
And thus the busy insect greeted:

"Say, what's the use of such as you,
(Excuse the freedom of a neighbor!)
Who gad about and never do
A single act of useful labor?"

"I've marked well for many a day,
In garden blooms and meadow clover;
Now here, now there, in wanton play;
From morn till night an idle rover.

"While I discreetly bide at home,
A faithful wife—the best of mothers;
About the fields you idly roam,
Without the least regard for others.

"While I lay eggs and hatch them but
You seek the flowers most sweet and fragrant,
And, sipping honey, stroll about
At best a good-for-nothing vagrant!"

"Nay," said the Bee, "You do me wrong;
I'm useful, too; perhaps you doubt it,
Because—though toiling all day long—
I scorn to make a fuss about it!"

"While you, with every egg that cheers
Your daily task, must stop and hammer
The news in other people's ears,
Till they are deafened with the clamor!"

"Come now with me and see my hive,
And note how folks may work in quiet;
To useful arts much more alive
Than you with all your cackling riot!"

L'ENVOI.

The Poet, one may plainly see
Who reads this fable at his leisure,
Is represented by the Bee,
Who joins utility to pleasure;
While in this self-conceited Hen
We note the Poet's silly neighbor,
Who thinks the noisy "working-men"
Are doing all the useful labor.

—John G. Saxe.

ORIGIN OF PIN-MONEY.—Towards the close of the fifteenth century, an epoch that marks a transition style in the dress of ladies, pins were looked upon with great favor as new year's gifts. They displaced the old wooden skewer, which no effort of skill, no burnishing or embellishment, could convert into a slightly appendage. Pins in that simple age of the world, were luxuries of high price, and the gifts were frequently compounded for in money—an allowance that became so necessary to the wants of ladies of quality, that it resolved itself at last into a regular stipend, very properly called "pin money." We still keep up the term, although, now that pins are as cheap as dust, it means every thing or any thing except that which it originally implied.

How Kid Gloves are Made.

Gloves have been in use from very early times, being mentioned by such ancient writers as Homer and Xenophon. During the middle ages they were worn by certain officials as a mark of dignity. But as civilization advanced they gradually became common to all classes of the community. In the early part of this century there was no positive regularity in the cut and shape of kid gloves, all being left to the judgment of the cutter, who had no systematic pattern. In 1834 Xavier Jouvin invented a new method of cutting out the kid, doing it with geometrical precision. His system is extremely elaborate, having thirty-two sizes, and cutting ten widths to each size, in all making 32 different numbers. Since then other manufacturers have made numerous improvements in shape, finish and stitching, and now the best makes have almost reached perfection, and merit the growing demand, which is such that the price of skins have advanced fifty per cents in the last, fifteen years.

The term "kid," however, is a mere technicality, as the quantity consumed annually of leather bearing this name is largely in excess of what could be supplied from the skins of all the young goats that are annually slaughtered, lamb and other thin skins being extensively used. One of the Newark stores by actual count has retailed 472 pairs in six days, and a certain New York house retails \$300,000 worth annually. The value of those manufactured in France is estimated at fifty million francs, and there are large quantities made in Italy, Germany and England, and a comparatively small amount in the United States, at Gloversville and New York City.

As the sewing of a single pair of ladies' kid gloves requires five thousand stitches, for which the continental manufacturers pay about ten cents, it can readily be seen that this industry cannot be carried on extensively in this country. The seams are sewed with perfect regularity by placing the edges to be united in the jaws of a vice which terminates in fine brass teeth like those of a comb, but only one-twelfth of an inch long, the stitches being held by a knot to prevent ripping, which used to be a frequent source of trouble. It is necessary that the animal should be killed young, because as soon as it begins to feed on herbage its skin is impaired for this purpose. Eggs are very extensively used in preparing the skins—it is estimated that 60,000,000 are annually used in England and France alone. In coloring the various kinds of dye is applied to the outer skin with a brush by hand; if the skins were immersed the inner portion would also receive the dye and stain the hand.

France excels all in the variety and richness of her colors, which is attributed to her atmosphere and water—producing 200 different shades. Ladies' sizes run from 5½ to 8; gents' from 7½ to 11; misses' from 4 to 6½. Gents' are longer in the fingers and higher in the wrist than those of ladies' of like number, though they are alike in width, and the misses' gloves are narrower.

Home Interests.

THE VALUE OF TIME.

One of the most important lessons that can be impressed on the heart of childhood is that of the value of time. Indeed it is a lesson that none of us in riper years ever learn too well.

Those who have much to do and who arrange their work in the most methodical manner, are most keenly alive to the worth of every golden moment. It is this very class who always find time to keep every engagement and who are punctual to the hour and the minute in their engagements. With them every portion of the day has its allotted task or recreation, and these are so adjusted to each other that often tasks become recreations. Idle and purposeless people, unaccustomed to live a methodical and efficient life, have no conception of the exquisite satisfaction those enjoy who have something to show for every day they have lived. Repose earned by toil is doubly sweet. The mere pleasure-seeker knows little of real pleasure. This knowledge is reserved for those whose hours are nobly and wisely spent. They who seem to have the most leisure because they have nothing to do are least to be depended on in any enterprise that demands promptness and sustained effort. Thinking their tasks can be performed at any time, they suffer precious moments to pass in idleness, until the golden opportunity to do is gone. In all societies and communities we find it true of work, that "to him that hath shall be given"—work that demands immediate and persistent labor is given to those who already have the most to do. Parents may begin very early to

form in their children the habit of improving their time by imposing upon them stated tasks, and requiring their accomplishment within a certain period. For example in the matter of dressing in the morning, some children will be an hour in getting ready for breakfast, when 15 or 20 minutes is quite time enough. Or, they will dawdle over their lessons and be twice or thrice as long as need be in learning them, and thus have no time for play. Indulgence in this way of doing is very injurious to any child. Doubtless the habits of promptitude and regularity that are formed in children who attend large schools and are compelled to observe the rules which are laid down for their conduct are as intrinsically valuable as all they learn beside.

It is not easy for those who have no outward pressure that forces them to keep account with their moments to mark out a programme and work up to it, but a strong will can do even this, and when once the habit is formed life will possess new value. To professional and business men and women there is scarcely anything more annoying than the interruptions they often suffer during office and business hours from inconsiderate and idle friends and acquaintances. If a locomotive could, without slackening, or spending time in getting under headway again, stop at stations just long enough to discharge and receive passengers, the rate of speed would be indefinitely increased. But when, worse than stopping, it is entirely turned from its track and switched off upon another, the loss of time is irreparable. The least and the greatest courtesy those who set no value upon their own time can show to those who do, is to respect the privacy of the hours set apart to labor. Students, authors, ministers, editors, artists, appreciate no delicacy of friendship, no courtesy their friends and the public can bestow, of greater worth than that shown by leaving their hours of intellectual toil undisturbed.

Trades for Women.

All parents should bring up their children in such a way that they can maintain themselves. It is just as necessary for girls to learn some employment as it is for boys. Marriage is no longer the "chief end and aim" of sensible girls. It is not a haven of rest from labor, but a condition where every faculty of mind and energy of character are necessary to build up a happy home.

Every woman should be able to earn a support independent of her husband, should it become necessary. The avenues to work for women are widening, and the approach to the same wages for the same services rendered by men is slow but sure, and blamable are parents who do not give their girls the means of controlling their circumstances by a well-defined occupation. We have in mind a young woman, a graduate of a popular seminary, who was left, by the death of her husband, with a farm and but little money. With advice from her father she has carried on her farm, laying by a surplus every year, hiring a foreman to whom she gives wages and a share of the responsibility. She has pursued her musical studies, discontinued at her marriage, and is educating her children till they are old enough to leave home—an example of the superiority of intelligent power over the merely physical.

Flowers and Flower Gardens.

It has been said that few things tend to express the character and fortunes of individuals more than the appearance of the window-blinds, and the brightness and cleanliness of the windows of their dwellings. Nothing can be more true; and we cannot but feel, when this is admitted, that the same line of reasoning will be allowed with regard to flowers. If we pass by a house, even though it be in a narrow, confined thoroughfare, and see upon its window-sills bright rows of pots filled with gay geraniums, and well-formed fuchsias we suppose that surely in that house there must live some one whose mind is not wholly choked up and deadened with the dust and toil of the great city—one to whom the links are not yet entirely severed, which bind the heart to the loveliness of nature, and who still appreciates, with a tender care, the sweetest and most beautiful of her creations. Or, perhaps, our thoughts, taking a sadder turn, may imagine that some lone-hearted creature, who may have been fettered to his chamber for months, or years, by lingering maladies, flies from his own racking pains and thoughts, and seeks among those very flowers, which seem so gay, and indicative of youth and happy hearts to us, a solace and delight, which simple things like these

often render to the wretched-hearted and weary. Wherever flowers are seen, carefully tended, we may be sure there will be found people of a refined mind. No one who has not a gentle and a tender heart can truly love flowers; and any one who really does so, worships, it may be unconsciously, the Eternal One who formed them.

Treat Your Boys Well.

SOME mothers try to reach the soft side of their boy's nature with a kind word; some with a harsh word; and some with an old slipper. Some mothers try it in this manner:—"Now you great, big lubber, get right out of here and stop that outlandish noise, will you! Don't you know better than to whistle in the house? You are always in the road. Go way, and don't let me see you again to-day." Now Jim, John or Pete—whatever his name may be—will withdraw, and boy-like will say nothing; but boy-like again, will keep up a big thinking. If we could reach his thoughts it is more than likely they would run in this channel:—"Now why can't mother give a fellow a kind word once in a while! I know I ain't the worst boy in the world, but she appears to think so. If I am always in her way why does she always call for me when she wants a pail of water or an armful of wood? Why ain't I in her road then? It must be a disgrace to be a boy, for she and sisters are always snubbing me because I am a boy. I wish I was away from home, then I could have a few minutes' peace." If he goes down town with a view of finding a place where he is not in the road, it is very likely that he will not find the purest and best company in the world. The boys with whom he will have to associate have been through the same mill that he has, and being deprived of the home influence which they should have, they are not exactly model boys. They will swear, smoke, chew and play cards; and if J., the subject of our sketch, falls into the same ways, who is to blame? Mothers and sisters, for heaven's sake, make your home attractive for your boys. Don't find fault with them every time they stir, because boys are by nature a noisy set. Who would have them otherwise? Treat your boys well and give them good advice—in small pieces; don't feed them too much at once, or it will act in the wrong direction. Give them kind words, and you will never pass any sleepless nights on their account. A boy who has the right kind of a home will never turn out bad.

"I'll Pay You for That!"

A hen trod on a duck's foot. She did not mean to do it, and it did not hurt much. But the duck said:—"I'll pay you for that!" So the duck flew at the hen; but, as she did so, her wing struck an old goose, who stood close by. "I'll pay you for that!" cried the goose, and she flew at the duck; but, as she did so, her foot tore the fur of a cat, who was just then in the yard. "I'll pay you for that!" cried the cat, and she flew at the goose! but as she did so, her tail brushed the eye of a sheep, who was near. "I'll pay you for that!" said the sheep, and he ran at the cat; but, as he did so, his foot hit the foot of a dog, who lay in the sun. "I'll pay you for that!" cried he, and he ran at the sheep; but, as he did so, his leg struck an old cow who stood by the gate. "I'll pay you for that!" cried she, and she ran at the dog; but, as she did so, her horn grazed the skin of a horse, who stood by a tree. "I'll pay you for that!" cried he, and he ran at the cow. What a run there was? The horse flew at the cow, and the cow at the dog, and the dog at the cat, and the cat at the goose, and the goose at the duck, and the duck at the hen. What a noise they made, to be sure! Hi, hi! What is all this?" cried the man who had the care of them; "I cannot have this noise. You may stay here," he said to the hen. But he drove the duck to the pond, and the goose to the field, and the cat to the barn, and the sheep to his fold, and the dog to his house, and the cow to her yard, and the horse to his stall. "I'll pay you for that!" said the man.

They had been married five months, and she was turning the leaves of a book, when she espied a pressed flower, part of a bouquet he had given her previous to wedlock, and said, "'Tis but a little faded flower, but oh! how fondly dear!"

"I should say so," he growled; "that's a representative of a five-dollar bouquet; and to buy it I walked in to town and deprived myself of luncheon for a week."

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES,—I need not ask if you have forgotten me this month, for the number of beautiful letters that I have received tells me different. It is indeed highly gratifying to receive so many complimentary, and apologetic letters from my pet nephews and nieces. Allow me to congratulate many of you upon the well written and composed letters which you write. Well, how did you all spend Queen's Birthday? I trust enjoyably; there are so many nice amusements for the young to join in, and for the old to admire. I have much pleasure in complying with a nephew's request, which is to offer a prize for the three best original puzzles, to be given in by the 20th. First, a handsome chromo; second, for the largest number of correct answers to June and July puzzles, a beautiful chromo. These are good premiums, and from the keen spirit usually displayed, I expect a lively competition; so those desirous of obtaining them will have to put in practice the ADVOCATE motto, "Persevere and Succeed," and "If at first you don't succeed, try, try, try again."

UNCLE TOM.

PUZZLES.

81—RIDDLE.

Three to stand and
Twelve to run,
A line to guard them one by one,
A wooden head and an iron nose,
I sent this riddle well composed,
From a farmer's daughter.

82—HIDDEN PLACES.

1. As he left the hut Royal exclaimed, There is a happy home!
2. The hat was trimmed with buff; a long plume extended around the crown.
3. Boys and girls ride swiftly on sleds.
4. After bowing low Ellen recited a poem.
5. Newell, I made a warm scarf. STELLA.

83—

My first is surrounded by water.
My second is the plural of an article used for cutting.

My third is a musical instrument.
My fourth is the plural of something that has four legs, a back, but can neither sit nor walk.
My fifth is a group of islands in Mediterranean sea.

My last is a common measure.
The words, when put one under the other, and read diagonally across from the top to the bottom, that is, commencing with the first letter of the first word, and so on down to the last letter of the last word, form the name of a nation of America.
From our nephew, H PIPER.

84—RIDDLE.

I to a maiden doth belong;
Deprive me of my head,
A noxious creature then you'll have
To man and beast instead.
Again behead, though odd it may seem,
And then you'll find me in a stream.
JOHN MACKAY.

85—NUMERICAL ENIGMA.

I am composed of 20 letters.
My 7, 11, 20, is a personal pronoun.
My 3, 15, 8, 17, is a kind of grain.
My 14, 11, 5, 1, is a companion.
My 18, 10, 9, is a plaything.
My 1, 4, 16, 6, 7, is a hill.
My 18, 8, 2, is to attempt.
My 12, 13, 19, 8, 11, is a kind of incense.
My whole were the last words of a great statesman of England.

EDNA CLIFFORD.

86—ANAGRAM.

Amy hyt rafagencer cerv eb,
Kile eth sore-dub no het tere;
Dna hyt recyv trueiv niseh,
Hiwt a strule rome bulmisse.

KITTY LOWE.

87—NUMERICAL ENIGMA.

I am composed of 24 letters. My 2, 1, 20, 5, 13, is a machine. My 9, 1, 24, 23, 13, is a large spoon. My 8, 14, 16, 17, 12, is provision. My 10, 14, 19, 18, is a mineral. My 15, 13, 6, 3, is a marine animal. My 7, 13, 18, 11, is a shelter. My 21, 22, 4, 5, is a barbarian. My whole forms a proverb.

BEN. CROIL.

88—CROSS WORD ENIGMA.

My first's in fun, but not in game. My second's in fire, but not in flame. My third's in ale, but not in porter. My fourth's in rain, but not in water. My fifth's in voice, but not in sound. My last's in square, but not in round.

J. E. LOVEKIN.

89—NUMERICAL ENIGMA.

I am composed of fifteen letters. My 3, 11, 10, 15, 1, supply the treasury of the country. My 12, 4, 8, 8, 7, 5, an animal much to be dreaded. My 14, 9, 4, 13, is to spring. My 1, 6, 14, 2, is a kind of fish. My whole is what parents should always do.

90—SQUARE DIAMOND PUZZLE.

A consonant, a fuss, a dress, a plant, successful, name of a card, a vowel. Read down and across; a plant much in demand.

91—SQUARE WORD.

A measure of wine; a notion; enclosures for cattle; free from pain.

VIOLA.

92—SQUARE WORD.

A plant, surface, behind, appendages to the head.

93—SQUARE WORD.

A precious metal, a moulding formed like the letter S, part of a book, and to dare.

94—SQUARE WORD.

A kind of grain, a medley, a cleft, and a mark.

KITTY LOWE.

Answers to May Puzzles.

64.—Edmund Yates. 65.—A stitch in time saves nine. 66.—(Should have been hidden insects instead of hidden rivers.) Fly, moth, bee, flea, ant, mosquito. 67.—Butter-cup, ever-green, fox-glove, mari-gold. 68.—The tongue. 69.—Benjamin Franklin.

70.—Speak gently, kindly, to the poor, Let no harsh tone be heard, They have enough they must endure Without an unkind word.

71.—Sir Thomas Moore. 72.—Condemnation. 73.—Because he makes both ends meet. 74.—One rolls the paste and the other pastes the rolls. 75.—Because he would be the widow's mite. 76.—Because we sit upon forms and stand upon ceremonies. 77.—Pen-man-ship. 78.—Ouse, Nile, Tay, Red, Wye, Obi. A woman.

79.— T E N B A Z A R B E Z I O U E P I Q U E M U D E

80.—Bear and forbear.

Names of Those Who Have Sent Correct Answers to May Puzzles.

Henry Ptolemy, Isabella Martin, Carrie Bechell, Kitty Lowe, Frederic C. Baker, Viola, Edna Clifford, Ben Croil, Emma Boyle, James Drummond Dickson, William Ford, Minnie Morris, John Wright, Talitha Doust, M. Jane Flock, Nannie Henderson, Harry Trevail, A. Symonds, Louie Fairbrother, Humphrey Hamilton, Jane Beecher, Frank Peacock, Jane Shore, Susan Hunt, Samuel Henderson, Eleanor North, Oliver Godfrey, Nora Hooper, Joseph Wicott, Mary Hiscox, George Fleming, Samuel Paily, Fred Luce, Ira Carruthers, Lucy Jones, Austin Scott, Nellie Nicols, Theo. French, Thomas Johnson, Ida Smythe, William Begg, Joel Kennedy, S. Rogers, Mary N. Husband, E. C. Newton, Noah Bearings, W. H. Behee, Amelia Stranbel.

We place a star at the name of the one who succeeds in answering the most puzzles correctly, as a mark of honor. All communications must be in by the 20th in order to be inserted.

"A LITTLE more animation, my dear," whispered Lady B— to the gentle Susan, who was walking through the quadrille. "Do let me manage my own business, mamma," replied the provident nymph; "I shall not dance my ringlets out of curl for a married man." "Of course not, my love; but I was not aware who your partner was."

Uncle Ned's Defense.

My bredren an' sistahs, I rises foh to 'splain Dis mattah dat you's talkin' 'bout—I hopes to make it plain.

I's berry sorry dat de t'ing hab come befo' de Chu'ch, Foh when I 'splain it you will see dat it am nuffin much.

My frien's, your humble speakah, while trablin' here below, Hab nebber cared to hoard up gold an' silver foh to show;

We's only stoppin' here a spell; we all hab got to die, An' so I always tries to lay my treasahs up on high.

Dar's jest one t'ing dat pesters me, an' dat am dis, you see, De ravens fod old 'Lijah, but de critters won't feed me.

Dey's got above dar business, an' jest goes swoopin' 'roun', An' neber turns to look at me a-waitin' on de groun'.

I waited mighty sartin like; my faith was pow'ful strong; I reckoned dat dem pesky birds would shuahly be along.

But oh, my fren'ly hearahs, my faith it cotched a fall, De aggravatin' fowls went by, an' nebber stopped at all.

De meal an' flou' was almos' gone, de pork bar'l gettin' low, An' so one day I 'cluded dat I had bettah go

To Brudder Johnson's 'tater patch an' borry jest a few, 'Twas evenin' fore I got to start, I had so much to do.

It happened dat de night was dark, but dat I didn't min', I knowed de way to dat ar patch, 'twas easy nuff to fin'.

An' den I didn't car' to meet dat Johnson, foh I knowed Dat he would sass me 'bout de mess ob 'taters dat I owed.

I got de basket full at las', an' tuk 'em on my back, An' den was goin' to tote 'em home, when some-thin' went ker-whack.

I t'ought it was a cannon, but it jest turned out to be Dat Johnson's ole hoss-pistol a-pointin' straight at me.

I tried to argufy wid him; I 'pologized a heap, But he said dat stealin' 'taters was as mean as stealin' sheep.

Ob course I couldn't take dat ar; it had an ugly soun', The only t'ing foh me to do was jist to knock him down.

My bredren an' sistahs, de story am all told, (Ob course I pounded Johnson till he yelled foh me to hold)

An' now I hopes you 'grees wid me dat dis yere case, an' such, Am berry triffin' mattahs to fotch befo' de chu'ch.

HUMOROUS.

A LAY OF TRUE LOVE.—As a young man was looking over a barrel of eggs received at a grocery on Newark avenue, Jersey City, about a month ago, he found the following inscription upon one of the eggs:

"If this you see, young man, Write just as soon as you can, And let me hear from my favorite egg; This great boon I humbly beg."

"JULIA BRIERSON, Westfield, Ohio." The youth immediately wrote to the address, inclosing his photograph, and received a reply and picture from the writer of the lines. The correspondence was continued to the satisfaction of both persons, who are to be married next month. It is said the young lady is the daughter of a wealthy farmer, and wrote the lines in jest, never expecting to hear from them.

"Ho! all ye dyspeptics," says a patent medicine advertisement. If all the dyspeptics would hoe regularly their number would be reduced.

"LET me see," says the nurse of a sick man, "the doctor said one teaspoonful every ten minutes; that makes six an hour; say seventy-two during the night. I shall give him seventy-two spoonfuls right away, and have a chance to get a little sleep myself."

A HUSBAND finding a piece broken out of his plate and another out of his saucer, petulantly exclaimed to his wife: "My dear, it seems as if everything belonging to you is broken." "Well, yes," responded the wife; "even you seem to be a little cracked."

A DANDY of twenty-six having been termed an "old bachelor," appealed to an elderly gentleman to decide whether he should be called old or not, giving his age as twenty-six. Said the elderly gentleman: "It is owing to how you take it. Now, for a man it is young enough, but for a goose it is rather old."

Why is Gibraltar one of the most wonderful places in the world? Because it's always on the rock, but never moves.

"Make your home happy," said a club man to his friend, "even if to do so you have to stay away from it, as I do."

"Equality means," says a certain writer, "a desire to be equal to your superiors, and superior to your equals."

Some young rascals were annoying an old gentleman by snowballing his house. He rushed out and caught a youngster who was standing one side and looking on, and thinking him to be one of the offenders, began to administer a flogging. But, to his surprise, the harder he whipped the harder the boy laughed, until he stopped and sought an explanation. "Well," said the boy, "I'm laughing because you are awfully sold; I ain't the boy!"

A PLEASANTER IF NOT A BETTER JOB.—One of the Methodist ministers of this city was, a few days ago, called upon by a German and requested to conduct the funeral services over his wife, who had just died. Brother L—, with his usual urbanity, consented, of course, and the services were held, with due decorum and solemnity. After the funeral was over, the forlorn widower stepped up to the minister and the following dialogue ensued: German—"Vell, Mr. L—, how much you charge for burying my wife?"

Preacher—"Oh! I do not charge anything for attending funerals."

German—(smiling significantly)—"Vell, now, this is very kind of you. But shtop a minute. In a few days I give you a better job than dat."

Preacher—"Why, what may that be?"

German—"Oh! fery much better job than dat. I be's going to get married again."—Rock-ster Express.

WANTED.—The following advertisement is by a modest specimen of "Young America"—"Wanted, situation, by a strong, active American youth of seventeen, with plenty of muscle, vim, and health. Not afraid to knuckle down to hard work of any kind; is well educated, and has a good knowledge of Latin. Ambition highly developed, and brains to back it. Penetration sharp as the business end of the hornet, and cheek bigger than either. Lawyer's office preferred. Highest and best of city references. Any one in search of such a bonanza will strike oil—a regular spouting well—by addressing "Seamander; D. A. office."

A Wedding Incident.

An amusing wedding incident recently occurred at Stoke Church, England. The Rev. J. Hector de Courcelles officiated, and when he asked for the ring, it was missing. The bridegroom declared that the bride had it; the bride said to the contrary. The service was stopped, both turned out their pockets, and meanwhile the bridegroom rattled the bride somewhat soundly for her alleged carelessness, while the bride persisted that she had given the ring previously to the bridegroom, and that he must have lost it.

Mr. De Courcelles had no ring on, nor had any one in the church, and bride and bridegroom departed to the church porch—the one grumbling and the other scolding—to look for the missing link. At length, it struck the clerk that a small ring attached to his watch-guard, to which hung a locket, might be detached and lent for the occasion. It was very small, but it just went on the orthodox finger, and the clergyman therefore returned to the altar, and the two were made man and wife. Directly they were married, however, the railing commenced again, and continued until the ring was found in the bowl of a pipe that was in the man's pocket.

The Queen's Birthday.

The high esteem in which our Queen is held and loyalty to the British Crown causes this holiday to be more generally kept than any other. Every village, town and city have their amusements of different kinds. The pealing of the bells, the firing of royal salutes are the morning signals in the cities; the firing of anvils, which make about as much noise as some cannons, arouse the villagers; the universal bang of the fire cracker is heard at every corner, much to the amusement of the boys, but to the dread of many kind sisters and mothers.

In this city the great attraction was

AN INTERNATIONAL BASE BALL MATCH

between the United States and Canada—the Boston Club, of Boston, one of the best clubs in the States, and the Tecumseh Club, of London. Each

ing. This gave the victory to the Americans; the Canadians expected a much worse beating, as the American club had been longer in practice.

During the game the cheering of the spectators was sometimes deafening, as a run would be made or good play performed. All enjoyed the game heartily. Outside of the ground every available tree was filled with boys, anxious to get a glimpse of the game.

The Tecumseh Club will play the Boston Club in Boston on the 4th of July. This game is gaining popularity very fast in this part of Canada; the boys at nearly every school are beginning to take it up. There is a time for all things, and recreation is essential to a proper development of our boys; we are apt to overwork our boys on the farm, or not to give them recreation enough. If John, Tom and Harry have worked faithfully all the spring, or even for five and a half days during

is 10 cents. If a subscriber sends us one dollar with a new name, we will give this picture and the base ball book to him, and the FARMER'S ADVOCATE for one year to the new subscriber.

Natural History.

Kats are affectionate; they luv young chickens, sweet kream and the best place in the front of the fire-place.

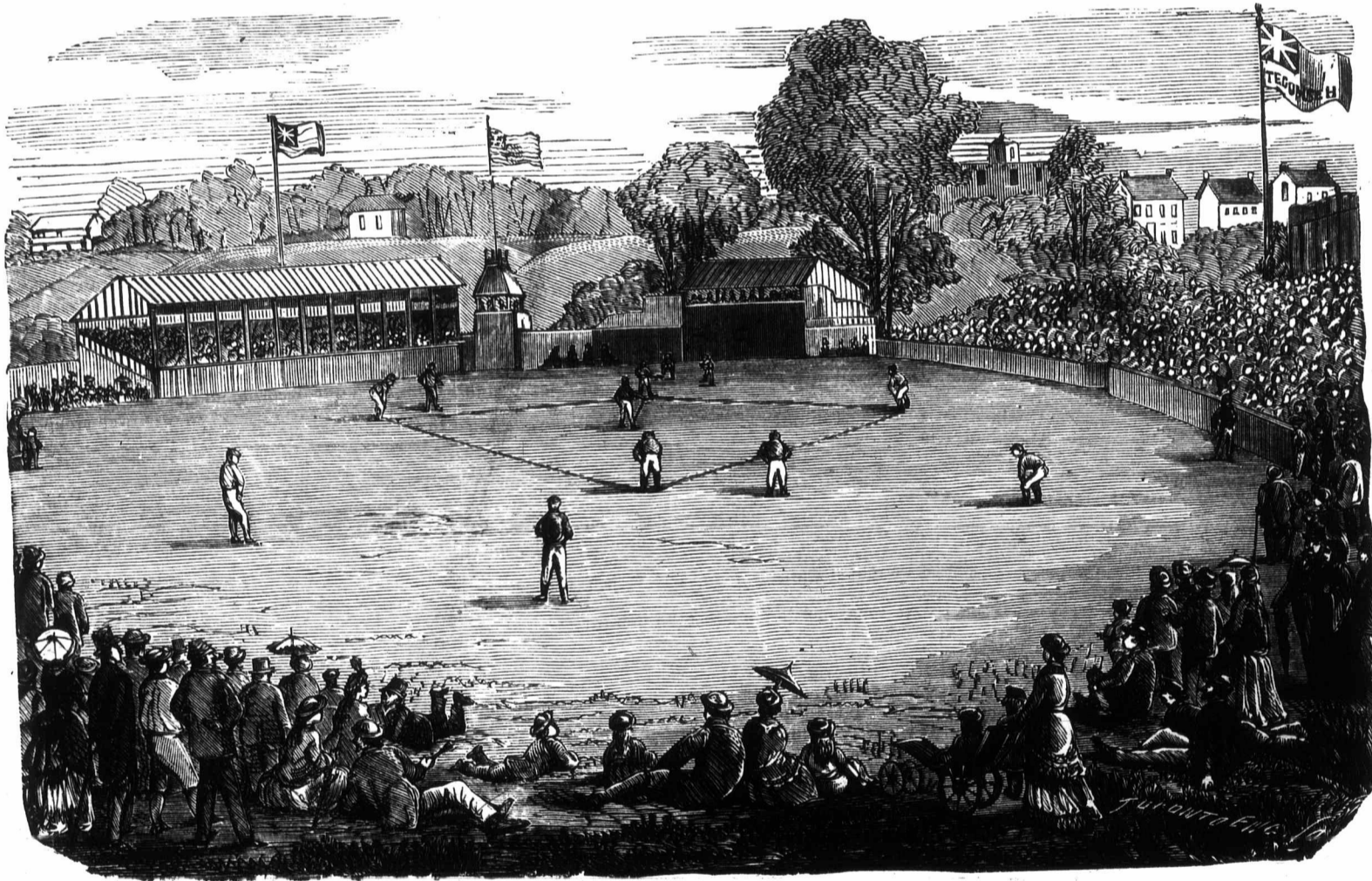
Dogs are faithful; they will stick to a bone after every boddy else has deserted it.

Parrots are easily educated, but they will learn to swear well in half the time they will learn enny thing else.

The birds eat bugs and worms for plain vittles, but their dessert konsists ov the best cherrys and gooseberries in the garden.

The owl iz only a picture ov wisdom by dalite, when he kan't see enny thing. When it kums night his wisdom wholly konsists in ketching a field-mouse, if he kan.

The donkey iz an emblem ov pachunce, but if you studdy them klosser you will find that lazyness iz what's the matter ov them.



THE QUEEN'S BIRTHDAY.—THE INTERNATIONAL BASE BALL MATCH BETWEEN THE U. S. AND CANADA.

club strove hard for the victory. The flags of each nation were flying, and the band enlivened the spectators until play was called. About seven thousand spectators witnessed the contest.

Base ball is something like the old English game of rounders, a club being used instead of a cricket bat, and stumps are dispensed with. Cricketers look on base ball as an inferior game to cricket; American spectators enjoy a game of base ball because it is generally over in about two hours, and more play and activity can be seen in that space of time than by watching a game of cricket for a whole day. In base ball the player must run or go out if he strikes at three balls or has three good balls pitched to him; in cricket a good player may keep the bat half a day, if he properly protects his wickets. In cricket each side has but two innings; in base ball they have nine, or more, if necessary.

At the ninth innings of this international game each side had six runs; a tenth innings was called, and the Bostons got one run, the Tecumsehs noth-

the past week, most probably your pa will give you a ball and let you have a half-day's holiday with your neighbors. If you have not worked well or studied your lessons properly, and have not helped ma when you could, you do not deserve one. We know nearly all our nephews are good boys, and you will have your ball, and perhaps next year some of you may help to beat the Yankees, should they again come across to fight us at a friendly game of base ball. Will you now throw up your hat with me and shout "God Save the Queen?"

We think it right to let our engraver employ some of his time occasionally for the pleasure and amusement of our nephews and nieces. Our artist drew this on the ground. The Tecumseh Club holds these grounds, and has erected the stands you see and many more that you cannot see. The grounds and scene had to be reduced to suit the view as well as possible.

For the full rules and regulations about the game you can get the Canadian Base Ball book; the price

The eagle iz the monark ov the skies, but the little king-bird will chase him to hiz hiding place. The ox knoweth his master's krib, and that iz all he duz kno or care about his master. Munkeys are imitatiff, but if they kan't imitate some devltry they ain't happy.

The goose iz like all other phools—allwuss seems anxious to prove it.—Josh Billings.

DON'T LOSE A MINUTE.—Keep busy. The man who has nothing to do is the most miserable of beings. If you have no regular work, do chores as farmers do when it rains too hard to work in the field. In occupation we forget our troubles, and get a respite from sorrow. The man whose mind and hands are busy, finds no time to weep and wail. If work is slack, spend the time in reading. No man ever knew too much. The hardest students in the world are the old men who know the most. If you lack books, there are free or very cheap libraries, at least in cities, at your command. The man who does not acquire some item of useful information between daybreak and bedtime must mournfully say, with the Roman emperor, "I have lost a day."

How
We insert a table for those who have not seen

1	2
3	35
5	37
7	39
9	41
11	44
13	45
15	47
17	49
19	51
21	53
23	55
25	57
27	59
29	61
31	63
33	64

There being of them containe. Then add column that correct answer

An English visited one of were stranger civilly, and in should speer them yourself ing ascertaine desired the m great success, numerous into Israelites from he would be g and at once 1 There was a d Lowland gent the boys are accent; let m And he inquir Phawroah dec upon which t you can't spee it." And he at his hinder "He was droc fellow comm that."

See V

We cannot necessity of order when in the rain and knows that with a good t even does not being bright, and length? he can turn plough, than team could s labor is less axle and a n both econom that these promptly an

But while in "apple pie vote some i which his w needs a score will be no tr are consider some of it is kinde the fi and are with two may be kitchen win comfort ma Some hook her in keep barrel may a hoop. T the old bro ways and i able to so a that she wi ger in a sing

How to Tell Your Age.

We insert a table which may afford our readers, who have not seen it before, some amusement:

1	2	4	8	16	32						
3	35	3	35	5	37	9	41	17	49	33	49
5	37	6	38	6	38	10	42	18	50	34	50
7	39	7	39	7	39	11	43	19	51	35	51
9	41	10	42	12	44	12	44	20	52	36	52
11	44	11	43	13	45	13	45	21	53	37	53
13	45	14	46	14	46	14	46	22	54	38	54
15	47	15	47	15	47	15	47	23	55	39	55
17	49	18	50	20	52	24	56	24	56	40	56
19	51	19	51	21	53	25	57	25	57	41	57
21	53	22	54	22	54	26	58	26	58	42	58
23	55	23	55	23	55	27	59	27	59	43	59
25	57	26	58	28	60	28	60	28	60	44	60
27	59	27	59	29	61	29	61	29	61	45	61
29	61	30	62	30	62	30	62	30	62	46	62
31	63	31	63	31	63	31	63	31	63	47	63
33	34	36	40	40	48						

HOW TO WORK IT.

There being six columns, you find out how many of them contain the number of years your age may be. Then add the larger figures at the top of each column that contains your age, you will have the correct answer.

An English Clergyman and a Lowland Scotsman visited one of the best schools in Aberdeen. They were strangers, but the master received them civilly, and inquired, "Would you prefer that I should speak these boys, or that you should speak them yourselves?" The English clergyman, having ascertained that to "speak" meant to question, desired the master to proceed. He did so with great success, and the boys answered satisfactorily numerous interrogations as to the exodus of the Israelites from Egypt. The clergyman then said he would be glad in his turn to "speak" the boys, and at once began. "How did Pharaoh die?" There was a dead silence. In this dilemma the Lowland gentleman interposed. "I think, sir, the boys are not accustomed to your English accent; let me try what I can make of them." And he inquired in his broad Scotch, "How did Pharaoh die?" Again there was a dead silence; upon which the master said, "I think, gentlemen, you can't speak these boys; I'll show you how I do it." And he proceeded: "Fat cam to Pharaoh at his hinder end?" The boys answered promptly, "He was drowned;" and, in addition, a smart little fellow commented, "Ony lassie could hae telt you that."

See What Your Wife Wants.

We cannot too often remind the farmer of the necessity of keeping his farm utensils in perfect order when in use, and of protecting them from the rain and sun when not in use. Everybody knows that much more labor can be performed with a good tool than with a poor one. What boy even does not know that his hoe works better for being bright, and with the handle of the right size and length? What ploughman does not know that he can turn a finer furrow with a bright, clean plough, than with a dirty and rusty one? If the team could speak, they would tell you that their labor is less with a bright ploughshare, a well oiled axle and a nicely fitting yoke or harness. It is both economy and humanity to take special care that these seemingly unimportant details are promptly and faithfully attended to.

But while the husbandman is placing everything in "apple pie" order, we would suggest that he devote some attention to that part of the labor which his wife directs or perhaps performs. She needs a score of little trifling jobs performed which will be no trifle when her comfort and convenience are considered. The wood needs to be split finer, some of it is too long. She needs something to kindle the fire with quickly, when you are in a hurry and are withal a little fretful at delay. A shelf or two may be "handy to have." A screen for the kitchen window or a new window for light and comfort may be within the range of possibility. Some hooks in closets or behind doors may assist her in keeping things "picked up." The flour barrel may need a cover or the washtub may need a hoop. The mop may need reconstructing and the old broom may need replacing. In a thousand ways and in any moment of leisure you will be able to so assist your wife and lighten her labor that she will appear to have grown ten years younger in a single hour. Try it.

Are not the labors of the wife and of the house servants too often looked upon as unproductive and of minor importance, compared with the outdoor work of the men-folks?

Clean clothes to wear; clean, soft and well aired beds to sleep in; good, wholesome, nicely cooked meals, three times a day; and tidy and attractive rooms to live in, do not, perhaps, at first thought, seem to be as productive of wealth as the sale of the matured crops from the farm; but for what do we sell our farm products except for the purpose of securing just these very home comforts we have named? Without these what would our lives be worth? And with them, do we men-folks on the farm realize how much they have cost of hard labor and constant care on the part of wives and daughters?—*Etc.*

Commercial.

London Market.

GRAIN.
Delhi, \$2 to \$2; Treadwell, \$2.40 to \$2.80; Red Winter, \$2.30 to \$2.60; Spring Wheat, \$2.40 to \$2.80; Barley, \$1.00 to \$1.10; Peas, \$1.25 to \$1.25; Oats, \$1.45 to \$1.48; Corn, 90c. to \$1.10; Buckwheat, 80c. to \$1.00; Beans, \$1.00 to \$1.37.

PRODUCE.
Eggs, per dozen, 10c. to 11c.; Roll Butter, 18c. to 20c.; do., retail, 25c. to 30c.; Keg Butter, 18c. to 20c.; Cheese, factory, 10c. to 11c.; Hay \$9.00 to \$11.00; Straw, per load, \$2.00 to \$4.00; Turnips, 25c.; Carrots, 25c. to 30c.; Potatoes, per bag, \$1.00 to \$1.25; Onions, per bushel, 75c. to 90c.; Cordwood, dry, \$3.60 to \$3.70; do., green, \$3.50; Tallow, 6c.; do., rough, 4c.; Lard, per lb., 10c. to 12c.; Wool, 26c. to 28c.

FEATHERS.
Live Goose Feathers, per lb., 60c.; Geese and Ducks do., 50c.; Duck do., 40c. to 50c.; Hen do., 12c.; Turkey do., 5c.

MEATS.
Lamb, per lb., 7c. to 8c.; Beef, per 100 lbs., \$4.00 to \$6.00; Mutton, per lb., 6c. to 7c.; Dressed Hogs, \$6.75.

FLOUR.
Fall Wheat XX, per 100, \$5.00; Mixed Wheat, do., \$4.75; Spring Wheat, do., \$4.50.

SHORTS.
Coarse Shorts, per 100, \$1.00; Fine, do. per 100, \$1.20.

BRAN.
Bran, per 100 lbs., 70c.

LIVE STOCK.
Cattle, per 100 lbs; live weight, \$3.00 to \$4.00; Sheep, each \$4.00 to \$5.00; Lambs, each, \$2.00 to \$3.00; Milch cows, each, \$30.00 to \$40.00.

FRUIT.
Apples, per bag, 30c. to 40c.

HIDES.
Hides, 5c. to 7c.; Calf Skins, green, per lb., 9c. to 11c.; do., dry, per lb., 12c. to 16c.; Sheepskins, \$1.00 to \$1.50; Lamb skins, 25c.

TORONTO MARKET.
The following table represents the value of produce at the farmers' market:—Wheat, fall, per bu. \$1.00; wheat, spring, per bu. \$1.55; barley per bu. 55c. to 61c.; oats, per bu. 55c.; peas per bu. 85c.; rye, per bu. 65c.; dressed hogs per 100 lbs. \$7.00 to \$7.75; beef, hind-quarters, \$6.60 to \$7.00; mutton, per 100 lbs., \$7.00 to \$8.00; chickens, per pair, 60c. to 90c.; ducks, per brace, 75c. to 80c.; geese, each, 65c. to 75c.; turkeys, each, 75c. to \$1.50; butter, lb. rolls, 16c. to 20c.; butter, large rolls, 17c.; butter, tub dairy, best, 17c. to 20c.; eggs, fresh, 11c.; apples per brl. \$1.50 to \$2.50; potatoes, per bag, \$1.20 to \$1.30; onions, per bu. 90c. to \$1.00; carrots, per doz. 30c. to 35c.; turnips, per bu. 30c. to 35c.; beets, per doz. 22c. to 25c.; parsnips, per bag, 10c.; hay, per ton, \$9.50 to \$15.00; straw, per ton, \$9.00.

Patrons of Husbandry.

Sub. Granges.

550, Silver Star—J. J. McCullough, M., Dundalk; Wm Quinn, S., Inistoga. 551, Rosedale—Samuel Irwin, M., Rosedale; H. J. S. Harrild, S., Rosedale. 552, Farmers' Friend. S. Plummer, M., Clinton; James Saitthwaite, S., Clinton. 553, Romney—Thos. Wright, Jr., M., Wheatley; T. C. Renwick, S., Romney. 554, Hillier—Robt. McCartney, S., Hillier; F. Jones, S., Hillier. 555, Scugog—David Bateman, M., Port Perry; John Foy, S., Port Perry. 556, Green Bank—Alex. Jamieson, M., Green Bank; Thos. Allen, S., Green Bank. 557, Edgely—James Brown, M., Edgely; Jessie Kaiser, S., Edgely. 558, Pride of the West—R. W. Malot, M., Leamington; W. G. Morse, S., Leamington. 559, Maple Leaf—Andrew Wright, M., Comber; Hugh Lindsay, S., Comber. 560, Roseneath—W. Brisbin, M., Roseneath; Geo. Whitaker, S., Roseneath. 561, Conquer or Die—Thos. Turner, M., Port Elgin; Wm. R. Turner, S., Port Elgin. 562, Sug Chartre—James Fisher, M., Wallaceburg; Robert Stewart, S., Wallaceburg. 563, Balsam Grove—Horace Botsford, D., Farmersville; Thos. Moulton, S., Farmersville. 564, Hertherbell—Thos. Wright, M., Gilbert's Mills; Marcus Warden, S., Gilbert's Mills. 565, Cavan—Sam. Staples, M., Ida; Wm. H. Coulter, S., Cavan. 566, Prospect Hill—Wm. Rowand, M., Walkerton; D. H. Morden, S., Walkerton. 567, Cataragui—P. W. Day, M., Collins Bay; A. M. McGuinn, S., West Brook. 568, Ops—John Calvert, M., Reaboro; F. Dawson, S., Omecmec. 569, Maitland—Robt. Fallis,

M., Newbridge, Ont.; Wm. Boyd, S., Newbridge, Ont. 600, Ulster—Abel Smeltzer, M., Ulster; Joseph Weelwood, S., Ulster. 601, Plainville—Alex. McLeod, M., Coldspring; John Kent, S., Coldspring. 602, Botany—James Thompson, M., Botany; A. Clark, Harwich. 603, Jolly Farmers—Ransom Enigh, M., Holbrook; Geo. W. Burtis, S., Burgessville.

Division Granges.

37, Horning's Mills—Robert McGee, M., Horning's Mills; H. A. Hay, S., Maple Valley. 38, Union—John Ramsey, M., Eden Mills; Robert Dredge, S., Rockwood. 39, Colchester—W. M. Blair, M., Truro, N. S.; J. N. Crowe, S., Truro, N. S. 40, North Perth—Wm. Keith, M., Hammand; Robert Forest, S., Newry Station.

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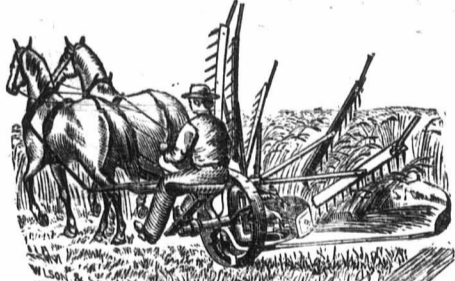
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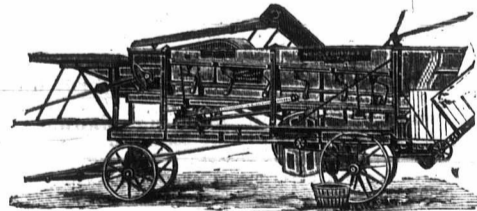
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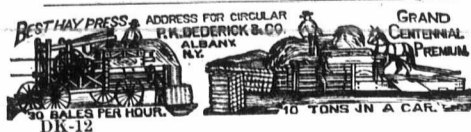
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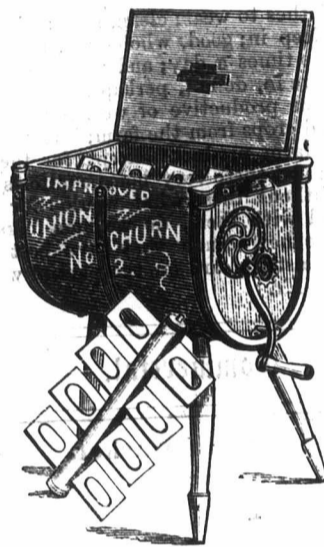
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