

# FARMER'S ADVOCATE

PERSEVERE  
& SUCCEED

VOL. XII.

LONDON, ONT., MAY, 1877.

NO. 5

## The Farmer's Advocate!

PUBLISHED MONTHLY BY WILLIAM WELD.

OFFICE: RICHMOND STREET, EAST SIDE, BETWEEN  
THE MARKET AND G.W.R. STATION, LONDON,  
ONT.

## TO SUBSCRIBERS:

TERMS.—\$1 per annum, postage paid; \$1.25 when in arrears.  
Single copies 10 cents each.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 reg-  
istered 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 imple-  
ments, 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.

### State of the Crops.

The gold-producing garment kept the wheat well covered during the past winter; the spring opened favorably. Now we have as fine promising fall wheat as we can desire; every farmer is pleased who has fall wheat; in every place it is looking most favorable. Unless something unusual should occur, we shall have the largest fall wheat crop harvested that ever has been raised in Canada. We consider the crop safe.

The young grass plants are all alive; the land has been in good order for sowing the spring crop. The stock has come through the winter well; there are no virulent diseases among horses, cattle, sheep or swine in any part of our Dominion that we have heard of. The prospects of a bountiful harvest were never more promising.

### PROSPECTS OF PRICES.

Our first crop to dispose of will be our wool. The market promises to be quite as good as ever for this staple. Butter and cheese will be in the market about the same time; for these the present price is high, and the prospects are that it may advance. The market now opened in England for our live stock is such that we may expect an increase in the value of all our stock; in fact, this is felt already.

A war cloud is hanging heavily over Europe; small clouds are beginning to show themselves where they were not expected. War, like fire, when once started cannot easily be controlled; no one can tell where it may end. It may increase the price of our products very materially; the prices without war prospects will be good, as our stocks are at a lower ebb than they have previously been. Thus the prospects of crops and prices are as cheering as they can be.

THE PRESENT FINANCIAL STATE OF AFFAIRS.  
Crashes, failures, incendiary fires and burglaries

have been too frequent. Men in business have had great trouble to meet liabilities; bankrupt stocks have injured honest dealers; a great deal of merchandise has been sold below cost, and trade and business have been at a very low ebb. Very few merchants have been able to hold their own; expenditures for improvements have been very cautiously made; many weak and shaky institutions have ceased to exist. Cash has been difficult to procure; at the same time immense sums are being held by the banks. Farmers have been closely pressed to meet payments, and a general depression has fallen on all. Nothing could show it more clearly than the some three or four hundred letters that have been received at this office. They run pretty much thus: "Times are so hard I must stop my paper." "I cannot get a dollar; have payments to make; I like the ADVOCATE well, and will send for it as soon as I can afford it." These letters should be read by our legislators, because they are indicative of the depression among our producing classes. Some may censure us for publishing this, but a few hundred names off our list now will not stop this journal; a few years ago it might have done so.

The return of prosperity is very evident. The prospect of a good crop will cause holders of cash to seek investments for it. The in-coming crop, if at all equal to present appearances, will add to the feeling of confidence as every favorable day appears.

Wholesale merchants, bankers and capitalists pay quite as much attention to the weather as the farmer does, and base their works accordingly. Property will increase in value. The most successful and safest farmer is the one who attends to his own business, that is, to raise produce and sell it. We repeat this—to raise and sell it.

As soon as the wool market is fairly open, sell your wool. Do not wait for higher prices, or hold for speculation. As soon as your butter or cheese is fit to sell, get your money; do not hold for higher rates. The prices are good; speculators may gain or lose trading, and mercantile business requires as much learning as farming does. There are enough speculators and merchants. Let no war prices work your imagination, or cause you to withhold your produce. The war may soon be over, and the value of produce will then recede. We regret that war should be necessary. Canada may be called on to furnish aid to our mother country; it is our duty to respond cheerfully; in fact, we should volunteer our unasked assistance to strengthen the British lion.

We are pleased to feel a certain assurance of a speedy release from the tight monetary pressure from which Canada has been suffering.

### The Great Shorthorn Sale of 1877.

This year the great sale of the season is to be held in the city of London, on Wednesday, the sixth of June. Mr. R. Gibson will sell his entire herd, J. Hope will sell his imported herd, Col. Taylor and several American gentlemen will add

some choice animals. We understand this sale is to be different to most Shorthorn sales: The cows are to have their calves by their sides; no barren animals, or animals with short pedigree, are to be offered; neither are culled bulls to be sold at this sale. Some leading breeders have desired to send animals to this sale, and their stock has been rejected. In many sales there is often a tail or fag end which comes pretty close to the head; this lot, from what we have seen and heard, are to be of a very high merit throughout. Gentlemen desirous of obtaining the best and choicest animals will attend this sale from all parts of the States and Canada. Every farmer desires to obtain a better animal than he has; some will begin by using a grade bull, next a half-bred animal, then a short-pedigree animal. The best farmers always desire something better than they have. It is from such a sale as this that the greatest improvements are made.

### The Provincial Exhibition for 1877.

To the Directors of Canadian and American Railroads:—

As cheap postage has so greatly increased the transmission of letters, in a similar manner cheap rates might induce increased travel. As letters increase traffic and trade, so does the increase of passenger traffic increase freight. Also, persons once induced to travel, are more desirous to travel oftener. The great success of the Centennial Exhibition was greatly due to the cheap rates allowed on the American lines. It also resulted in an immediate profit to the railroad companies, and has increased the desire to travel in future. The rates from some cities to Philadelphia and return were one-third the usual rates. We believe you will find it much to the advantage of your present and future receipts to allow passengers to pass over your several lines, at a cheap rate, to attend this Exhibition, which is to be held in the City of London in September.

The Exhibition Grounds are the best and most conveniently situated in Canada. The railway facilities are unequalled, not only affording direct communication to all parts of Canada, but also being situated on the direct line of rail between the Atlantic and Pacific, thus affording the Americans an opportunity of seeing the Exhibition without extra travel. The finest farming lands are in this locality. There has always been a larger exhibit of stock in London than at any other place in Canada, and the present Exhibition promises to exceed any previous one.

We would respectfully request that our Canadian railroad managers should allow passengers to visit this Exhibition at one-third the usual rates per return ticket, on all their lines; and that our American neighbors would grant return tickets to our exhibition at half rates on their lines, as Canada contributed so handsomely towards making the Centennial Exhibition a success. This small favor might be granted to make our Exhibition a success. Having been requested by the Managing Committee of the Association to endeavor to obtain favorable passenger rates, I shall be pleased to have your reply to the above request.

Yours respectfully, W. WELD.



### Our Correspondence Department— Flax.

Of the various departments of the FARMERS' ADVOCATE, that of correspondence is one of the most interesting to those for whom our paper is principally designed. From the beginning, our aim was to establish a means whereby farmers could communicate to farmers their experience in the various branches of agriculture, and the result of their experiments. This we consider a more effectual mode of giving and receiving information than dry lectures that are, at the best, of little interest to practical men. Science in agriculture is comparatively little worth till tested by practice. Were proof needed of the importance of this Department, we have but to refer to the columns devoted to it in our journal, and to the great number of intelligent farmers in every part of the Dominion, and even some beyond its limits, who avail themselves of the privilege afforded them in writing to us from month to month. And the queries from those who are asking information are not without their value to our readers, leading to profitable suggestions. To the enquiry, "On the Subject of Soiling Cattle," we reply in this number. We now reply to another query:—

**ON FLAX CULTURE.**—Flax can be grown on any soil, but, as with all crops, some soils are especially suited to it, and on such it is most profitable. The soil best adapted to it is a deep loam, dry and fertile. We have grown it on every variety, and in every instance with profit; but on soil not naturally suitable for it the expense of preparing it will be greater, and in neither quantity nor quality will the return be so good. In the north of Ireland, where so much attention is paid to flax culture, the preparation of the soil is as follows:—For the preceding crop the land is ploughed deep and well cultivated. When the crop is removed, the surface is lightly ploughed or cultivated in order that the weed seeds may germinate and be killed. In the fall the land is then ploughed deep—not a foot left uncut—and the deep furrows and water-cuts thoroughly cleaned up so that there is no obstruction to the passing away of the water. The soil having been subjected to the mellowing influence of the winter frost, is in good condition for the further preparation for the sowing of the seed. As soon as the ground is dry in spring, it should be plowed again three or four inches deep. This plowing, and a thorough harrowing, are necessary to make the soil fine enough for the seed. Manure is unnecessary if the soil be in good condition from previous attention and manure. Fresh farm-yard manure would be injurious to the crop.

**SEED AND SOWING.**—The best seed is that imported from the ports on the Baltic. Though much seed is saved in Ireland, that from Riga is always in the greatest demand, and brings the highest price. Its quality is judged from its weight, its shade of color, and its oiliness. The quantity of seed per acre differs according to the soil, from 2 bushels on strong soil to 2½ or 3 on soil lighter and less fertile. It is sown by hand, broadcast, and covered by a light seed-harrow. The best time for sowing in this climate is about the first week of May. In Europe, where the seeding is generally accomplished earlier than it is here, flax is sown through the month of April and on till the first of May.

**WEEDING.**—The preparation of the soil, as directed, leaves little to be done in weeding; annual weeds were killed, and if any other, such as thistles, ragworts, &c., they can be easily cut down.

**PULLING OR MOWING.**—What time the bulbs begin to change their green color for brown, and the delicate leaves on the stalk have become yellow for two-thirds of its length, it is time to pull

the flax. By some it is pulled earlier to obtain a finer fibre, and by some later to secure a heavier yield, but we have concluded, from some years' experience in flax culture, that the proper time is that we have stated. Some flax-growers adhere to the old method of pulling the flax, but it can be mowed at less expense, and without any waste of fibre.

Rippling or separating the seed from the stalk, and rotting to separate the fibre from the woody part or shoves, are subjects for a later season, and for that we leave them.

**THE PROFITS OF FLAX CULTURE.**—That a flax crop may not pay expenses is true, but the same holds good of any crop. There may be a bad crop, low prices, a loss, but it is equally true that a fair profit may be expected from growing flax as from any other crop. An acre of land will yield, if well cultivated, four hundred to five hundred pounds of lint, and from twelve to fifteen bushels of seed.

#### Soiling Cattle.

An article on this subject appeared in the FARMER'S ADVOCATE a few years since, but very many who are our subscribers at present were not subscribers then; and besides that, it is a subject of so much importance to farmers that a further consideration of it will be of use to many besides those who have been asking for some information on the subject. One correspondent, "Mosa," is very particular in his queries, and as he takes up the points so minutely, we reply to him, and through him to others.

"How many acres will it take to keep ten cows from May to 1st of November?" The number of acres required cannot be exactly named, as some land will yield more forage than other, and the quantity of produce and the number of cattle fed must vary with the season and the soil. We may, however, estimate that eight acres cut for soiling will not only yield abundance of food for ten cattle for six months, but some can be saved to add to the winter's hay.

"What kind of food is best to grow?" For the first couple of weeks of May you must rely on the mangolds saved from the last fall. The first green feed for soiling is rye sowed in September. In the middle of May this may be mown. In feeding it, it is well to add a little dry food as hay. After rye the next soiling is oats and peas mixed, an excellent food for any stock on the farm. After this mixed crop, the clover will be well in season. Following the clover comes in the corn—Western or Canadian, as is thought best.

"How much pasture, if any, is necessary, more than to turn the cows on for exercise?" No more is necessary, and the area of land stated is sufficient without pasture; but in our own feeding by soiling we preferred a mixed system, part soiling and part pasture for milch cows, feeding them in the house in the heat of the day and any other time we thought better.

"Is it necessary to house them?" It would do, as suggested, "to feed them from racks in enclosures when the weather is fine, and to house them when stormy." Whether fed in the house, or more at large in an enclosure, care must be taken to make the most of the manure, which is one of the greatest sources of profit from soiling. More manure, and that of a better quality, can be made by soiling stock in summer than at any other season, and by any other means. Straw for bedding may not always be to be procured—if not, some substitute can be had. We used for the purpose peat, (or muck) dried by exposure to the air, and all the weeds on the farm were used as litter. Soiling, as must be expected, entails more labor and expense, but we have no doubt the expense will be well repaid if properly carried out.

Nor is the expense so very great, as is supposed by some who have never tried the experiment. An English farmer fed two hundred and forty oxen in sheds through a whole summer by the mowing of one scythe; if the attendance on the animal be added to this, the amount will not be very large.

The profits may be summed up under three heads:—First—The difference of the acreage required for feeding under the system of soiling and that for pasture. Second—The sufficiency of good food for the stock at all times, even when pastures might be expected to be bare. Third—The greater value of the manure made by soiling. In pasturing cattle, their excretions are scattered over the field, and nine-tenths dried to worthless matter by sun and wind, leaving no profit. In soiling the manure heaps accumulate rapidly, and the superiority of the manure made in summer from soiling cattle to that made at any other season is very great.

The estimate we have given of the number of cows that may be fed by soiling on a given number of acres is lower than is generally given, but if a season be productive of forage any quantity not required for green feeding can be saved for the winter. There are other forage plants than those we have mentioned that may be profitably used for soiling, such as Hungarian grass and Millet.

#### Flax Straw for Feed.

In another column there is an article on Flax Culture. The following extract from the New York Tribune present a use for flax straw not generally known. N. B. G. says:—My experience, which has been considerable, convinces me that flax straw, mixed with chaff, so far from being injurious to cattle, or horses, is decidedly one of the best feeds to be had in the West. Cattle like it, and will eat it in preference to prairie hay, and when the two are mixed I estimate one ton of flax straw as worth at least two tons of Western hay. I have nine cows, which, during the past winter, had free access to stacks of both flax and hay, and in each case they showed a decided preference for the flax. Each of these cows was with calf, and have all done well. So far from causing fetus prematurely, in four instances they have gone from four to five days over the time allotted. My cattle are all looking well, having soft skins and glossy, oily hair, and are in every respect in better condition than in any previous spring, when deprived of this pabulum. My candid conclusion then is that flax straw will not injure either cattle or horses, under any circumstances when properly mixed with prairie or other hay, though it is well known that the naked seed given in excess will effect serious damage and premature discharge of fetus. A. N. W. adds:—Flax straw I have used for feeding cows with calf all winter, and they are, in fact, in better flesh than those of some of my neighbors who fed prairie hay.

#### An Agricultural College.

The American Farmer says of the Maryland Agricultural College that the last scholastic year nineteen counties of the State sent not a student, and the whole agricultural community of Maryland sent but seven. Agriculture, so far as we have learned, is no more and no better taught than before the promises of reform.

From the action of the late Legislature in setting out from the appropriation bills for 1876 and 1877 the items for the support of the College, with the intention of putting a stop to its drain upon the State Treasury, and the prospect of having its charter repealed at the next session, it is probably deemed advisable to make another great show of a change, and seek, under a plea of promised amendment, for a new lease of life.



### Restoring the Fertility of a Worn-out Farm.

That a farm, no matter how impoverished it may be, can be made fertile, no one can doubt for a moment. The most beneficial elements of plant food may have been exhausted, but they can be restored. It only requires the expenditure of time and money. But the question to be answered is, Can a worn-out farm be brought up to a state of fertility without the cost over-balancing the profit. Draining, if necessary, subsoiling, summer fallowing, the application of costly fertilizers, without regard to the expenses, will, in a short time, make a farm fertile, no matter how impoverished it may have been. But the capital expended in these means of improvement may exceed the whole value of the farm.

There is, however, a more inexpensive method of bringing up a rundown farm. There is no cheaper mode of enriching the land than by growing clover. Its long taproots search deep into the store of mineral food, and its leaves attract ammonia from the atmosphere; but the farm may be too poor for clover: it requires soil in pretty good condition. If so, sow some other crop, buckwheat, or rye, not sown for the seed, but for green manuring. For this purpose two successive crops can be grown in one season. The plowing in the first prepares the soil for the second. Every crop used in this manner adds so much more vegetable manure to the soil. Meanwhile, collect and apply to the ground compost of every sort. If there is muck anywhere on the farm, use it for top-dressing. Earth from the headlands may be used in like manner. After a couple of crops, such as we have mentioned, the land will bear clover, and if the system of farming that had previously been practised, and that robbed the soil of its fertility, be avoided, there will be no longer the anxious enquiry of how to restore the fertility of a worn-out soil.

### Breadstuffs for England.

From the latest reports of the imports of flour and grain into the United Kingdom we see the supply is short of the consumption. With 160,000 qrs. supply per week of foreign wheat, and 120,000 to 140,000 qrs. supply from the home deliveries of wheat, the weekly supply will aggregate 236,000 to 256,000 qrs., against the usual average weekly consumption of 400,000 to 423,000 qrs. This rate of supply will, if continued, rapidly diminish the stocks in granary.

The diminution of imports is attributed partly to the unusually light crops in the grain-exporting countries of the north of Europe, and to this is now added the anticipated closing of the ports of the Black Sea. The decreased imports are, however, more due to the short product of the United States, from which country so large a portion of the supplies of the United Kingdom was drawn in ordinary years. As the demand from England kept on increasing every year with her increasing population, the wheat production of America increased in at least equal ratio. The *American Miller*, referring to the increase of the production, says that in 1849 the whole wheat crop amounted to 100,000 bushels; in 1859 it reached 17,300,000 bushels, and in 1869 it was 287,000,000 bushels. This is owing, as an American says, to the opening of new territory to the pioneer, whose first crops could be made from wheat. The West, which is the greatest wheat-producing territory, suffered from unfavorable weather in the harvest; the year's crop throughout the country was short, almost without an exception. As a consequence of this, the exports of wheat fell short some \$2,200,000 as compared with 1875.

Were those nations that import so largely their breadstuffs from foreign nations dependent solely on one country for their supply, a famine might

seem imminent if the country of their supply were visited with an unfavorable season and short crops. Such a calamity cannot be expected now, though the imports from the Western Continent have fallen off so greatly. England imports her breadstuffs not only from America and the great granaries of the German and Russian Empires; her imports from Asia are large and every year increasing. In some of the fertile countries included in her Indian Empire, there was only wanted a means of transporting their produce to the seaboard, to enable them to supply Britain with all the breadstuffs she could require for her teeming millions. And that facility of transport to the ports for the growth of their luxuriant soil has now been afforded them. The great railway lines have developed the vast resources of the country. India is now known as a great wheat-producing and wheat-exporting country, and there can be little doubt that Great Britain's needed supplies of breadstuffs can be obtained from that country in a few years at farthest.

### The Legislature of Massachusetts and the Agricultural College.

If we are to judge of the estimation in which Agricultural Colleges are held in New England by the value set upon the service of that one in Massachusetts, we would not think they were of much benefit to the commonwealth. The action of the Legislative body indicates that they are greatly depreciated in public estimation. In the Senate, the subject of the grant annually made to the Agricultural College has been reduced from \$10,000 to \$5,000; and this reduction was acquiesced in by the House. At a subsequent meeting of the Senate, the resolution of the grant that had been agreed to coming up in the orders of the day for engrossment, inquiry was made as to the amount paid to instructors, and the fact was developed that President Clark receives a salary of \$2,560 per annum during his absence in Japan. Several Senators expressed their disapprobation of this payment, and the appropriation under the resolution was cut down for this reason from \$5,000 to \$2,500. We do business in another way in the Dominion.

AGRICULTURAL ORGANIZATIONS.—Massachusetts is paying annually \$18,000 to keep her agricultural organizations afloat; \$600 is given to each society, and that, in some cases, is not enough to pay the interest debts contracted for buildings which are going to decay, and for "tracks" which may not be worth a tenth of their appraised value for any purpose whatever. And all with her chairs at the College vacant for the want of funds to pay for the services of men to teach the boys how to keep an animal healthy and how to treat one when sick—one of the most important branches of learning which a young farmer can acquire.

### A Model Farm for Nova Scotia.

We have in this Province a Model Farm in connection with the Ontario School of Agriculture. It is becoming well known to the taxpayers. It may be well to take a look at what they purpose doing in this line in a sister Province. We turn from the estimates of the Province of Ontario to the prospectus of the Nova Scotia Agricultural Association in the *Journal of Agriculture*. The Secretary of the Central Board of Agriculture read a communication from Mr. Hendry, of Halifax, in which he pointed out the great facilities for live stock raising in Nova Scotia, and gave an outline of a scheme for organizing an association to be called the Nova Scotia Agricultural Association. The special object of the Association will be the managing and working of a stock and dairy farm in such a manner as will best advance the agricultural interests of the Province of Nova Scotia. The Model Farm is to consist of at least a thou-

sand acres, managed by a superintendent, under the direction of five gentlemen, to be elected by the shareholders. Capital, £5,000; in shares of £50 each. An annual sale will be held regularly after the second year's operations of the Association. The subject is submitted to the consideration of the Board, in the hope that they may be induced to take an active part in starting the scheme. If the Board would do so, Mr. H. has no doubt that one hundred gentlemen in Halifax would readily take an interest to the amount required.

The Chairman of the Board in his address referred to the propriety of introducing into the Legislature a general Act for the Province, giving counties the power, if they desired to exercise it of erecting exhibition buildings. He likewise alluded to Mr. Hendry's proposal to establish a joint-stock dairy farm, to Mr. Dupe's application for a vote to assist in the establishment of another farm and other measures. After consideration it was resolved, that they will bring the matter under the notice of the Agricultural Committee of the House of Assembly, with the view of ascertaining whether substantial encouragement can be offered, in any way, to promote the establishment of such a joint stock farm as the one contemplated.

### Millet for Soiling and Hay.

Of all the products of the farm none is more certain in its return. Whether grass seed be sown in autumn or in spring, there is an uncertainty of getting a good catch; and even if that be obtained the young grass may be cut off by the early or late frosts. Nor is this the only risk; a dropping May is necessary to give anything of a good pasture or meadow, and a dropping May is not of frequent occurrence in this climate. Some plant is needed to meet the shortcomings so frequent in the hay crop, as well as in the summer feeding of cattle. Whatever the merits of other forage may be when fully tried, there is none so much liked, for an extra crop, in America, as Millet.

This excellent grass will produce a fair crop on almost any soil. A soil may be light and impoverished, and yet produce a paying crop of millet. A very poor lot will, if well prepared, yield a ton of hay, and, in proportion to the state of the soil, will produce two or three tons. If cut for soiling when green it may, under favorable circumstances, bear another cutting. For hay, also, it is better to cut it before it is quite ripe. By this means the hay will be relished by horses and horned stock. There are several varieties of millet; some of them, as the Italian and the golden millet, have been said to excel the old favorite, the common millet. This last, however, we have found a very valuable forage plant. It is earlier than the Italian or the golden, and this is in its favor, and it has abundant foliage, rather coarse, but well liked by cattle. It may be sown broadcast, though we much prefer drilling it in. The produce from the quantity of seed sown is very large, as it tillers abundantly. The seed is used in feeding fowls, but allowing the seed to ripen depreciates the value of the hay very much—if ripened it is little if any better than other straw. A plot of ground in good tilth, and moderately fertile, will, under millet, pay as well as with any other crop, allowing for the labor of both.

Hungarian grass, another variety of the same species, is by some preferred to millet, producing heavier crops, but it grows coarser, and on that account is not so much relished by cattle.

THE RINDERPEST IN ENGLAND.—Several herds of cattle have been slaughtered to prevent the spread of the disease. In one instance it has been introduced by imported bone manure.



### The Ontario School of Agriculture.

The prizes and certificates of honor were awarded at this institution on Thursday, the 29th day of March. There were about forty pupils present; also, Dr. A. Smith, Veterinary, and Mr. J. R. Craig, the new Secretary of the Board of Agriculture and Arts, from Toronto, besides several of the leading farmers from the vicinity of Guelph and a few divines and doctors. Mr. Johnstone, the Principal, gave a very good address; J. Massie, M. P. P., Prof. Brown, the Farm Manager, Drs. Smith, Cowan, Grange and others made a few remarks. D. McCrae gave the scholars some practical questions regarding agriculture to answer; the veterinary surgeons also gave them many questions. These questions were of a practical and useful nature, and the boys answered them in a highly creditable manner.

There is a very marked improvement in the management and instruction of the pupils. Mr. Johnstone appears by far the most efficient instructor that has yet been there, and the boys must have been improved under his instruction. The course is somewhat different to that of a common school, but much that is taught there might and should be taught in many school-houses in Canada. The principal attention appears to have been paid to the Veterinary Department, as in this the boys were able to describe the anatomy of an animal. A large building has been erected for this department.

As this school has been sanctioned by both this and the former Government, as both have as yet been very unfortunate in its management, and as the expenditure and results will not bear scrutiny, it is not our desire to laud or condemn the institution which the highest in our land have sanctioned. There is no doubt but good may be done by it; it should, from the amount of money expended on it, be a grand centre from which agricultural information might be expected. We for years labored to get a somewhat similar institution established, but we desired to make it as it should be, self-sustaining and a source of profit. We are fully convinced that quite as useful an institution could be established in many localities by farmers under judicious management; in fact, we believe the best thing the Government could do with this school at the present time would be to sell it to any company of practical farmers that would give them half the price paid for the land, and agree to maintain it as an experimental, test and educational establishment. This has been and will be a political shuttle-cock; the best farmers we meet shake their heads at it; strong political parties blow hot or cold at every step, just as they happen to be in or out of power; office seekers and speculators hover over it like vultures expecting a bone to pick, and some have already had fat pieces.

We shall be pleased to give our readers any useful information that may be furnished by any of the staff of officers or by any of the pupils. Of course others may differ with us in our views; we do not wish all to see through our spectacles, but we allow a moderate space for correspondents to discuss the pros and cons on any subject pertaining to their agricultural interests.

We are pleased to note the improvements that have taken place, but we cannot conceive how any real farmer can be satisfied that his money should be expended on this institution. The cost and interest should always be kept in view; the instruction and information that have come from it are not at all equivalent to such a cost.

### Hints to Dairymen, No. 15.

Written for the Farmer's Advocate, by J. Seabury.

We often hear the remark made: "I would keep more cows, for it pays me better than anything else, but my wife and family do not like it."

I have often thought that if the man who made these remarks (for we often hear them) would consider the subject in all its bearings, he would find that the fault lay with himself and not with his wife and family.

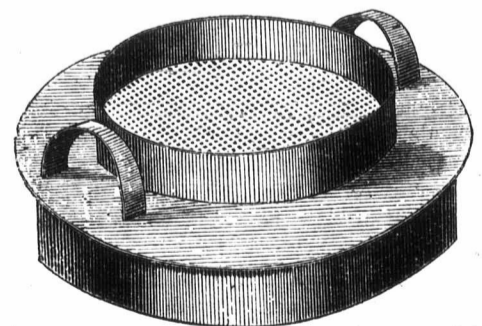
Too many of our dairymen and farmers, too, treat their wives and families more like hired servants than members of their families, who should have an interest in all that is going on about the farm. There should be a thorough organization, and each one should have his particular duties to attend to in each department. Before the factory system came into use, the farmer's wife had the management and control of the proceeds from her five, ten or more cows, and when the wants of the family were supplied, she disposed of the surplus butter and cheese and furnished her house with various necessaries and comforts, and often had a snug little sum of money put by for some particular occasion or event. But now she exclaims: "Alas! things are changed; I scarcely ever have a dollar, and what I get is given to me in a very reluctant manner." Here is the cause why she does not like keeping so many cows. This should not be. Every dairyman should allow his wife the proceeds from the same number of cows that she had formerly at her disposal, and if the wants of the family have increased, allow her more. There is no woman but what likes to have the management of her own house, and by all means give her sufficient to carry on that management. In nine cases out of ten she will do it very much better than you can. Every woman who has the management of a house should have her own purse, with a regular monthly or quarterly allowance. Let every dairyman give his wife and family the proceeds from a portion of his herd, and he will soon see a change in the state of affairs and very much more interest taken in matters connected with the dairy. Every member of the family should have their own purses, with something in them, too. It is just as necessary for a young person, either boy or girl, to be educated in the proper use and expenditure of money, as it is to know how to hold the plow or cook a dinner. These things cannot be acquired without practice. Commence by learning your sons and daughters when young to keep a cash book showing where all their pocket money comes from and goes to, and encourage them to be careful and think twice before spending, and to lay by a certain portion, be it ever so small. By doing this you may save them from becoming reckless and spendthrifts.

A great many farmers and dairymen wonder why it is that their sons and daughters do not like the farm better. The reason and causes are to a great extent in their own hands, and they have the moulding and making of their tastes for the farm. Many parents treat their sons as if they wanted to drive them away from the farm, and if they had wanted to accomplish that object, could not have pursued a better course. There is nothing tasty or attractive about their house, barns or surroundings. Their tools and machinery are all old-fashioned, as is also their way of doing things, and if the boys suggest anything new or any improvement, it is met with a gruff refusal. The boys know little or nothing about their father's intentions, not even what the next day's work is going to be until the morning. They are kept closely at home, seldom getting out, and then only for a day or part of one, and have never been any distance from home. What better course could a parent pursue, if he wanted to give his sons a distaste for farming, or drive them from it altogether? Now, my idea is that if a farmer or dairyman wants his sons to stay with him on the farm, and become farmers and dairymen, he must make it as agreeable as possible for them, and not as dis-

agreeable. He could increase and draw out their interest very much by giving one the proceeds from a small piece of land, and another the increase and profit from a few sheep. In that way he would be laying the foundation of a taste for farming. Of course he should make them keep an account of the cost of raising, keep, &c. Make your sons companions, and get their opinion on all matters connected with the farm. Do not let "the boy's head get too large for the father's hat." Study up your work and profession, and keep pace with the times, being alive to the improvements of the age.

By the time this reaches the dairyman three-fourths of the factories will have begun operations. I would advise every factoryman and cheesemaker to make a good, fair, square start with himself, his factory, and his patrons. Any good resolutions that you have formed with regard to yourself and the care and management of your factory, by all means carry out. Also, whatever rules and regulations you have laid down for your patrons, see that they are carried out. They may cause a little unpleasantness at the time, or it may be rather up-hill work, but you will be thought none the less of in the end for being firm and carrying your point. A cheesemaker, to succeed, must be decided and firm, having a fair share of intelligence, with the will to use the same. You cannot impress too strongly on your patrons the importance of taking the utmost care and cleanliness in the handling and delivering of their milk; especially in the airing and cooling of it down to a temperature of about 70°. If the warm milk is poured back and forth out of one pail into another for a few times, it will very much assist in cooling and deodorizing it. Every dairyman should have sufficient pails (and they should be tin) to hold all of each milking. Set your patrons the example, by keeping your factory and its surroundings neat and clean and tidy outside as well as in. The fact is, you cannot be too particular about your factory and its surroundings. It is much better to be remarked for being over particular than not particular enough.

A great deal of ingenuity has been displayed in trying to invent a ventilated milk-can, and one that will do its work as the milk is on its way to the factory. Among them all I have seen none that would seem to answer the purpose so well as that of Prof. Arnold, given in his book on "American Dairying," a cut of which is given just below. I cannot do better than describe it in his own words, and would strongly recommend every factoryman to have a few cans fixed with this arrangement and give it a fair trial:



"It is made by cutting a circle out of the centre of the cover and soldering over it a piece of coarsely perforated tin or wire cloth, and giving it a moderate depression in the middle. Around the outside of the wire cloth is soldered a flange of tin two inches high, to prevent any milk which may dash through the cloth from wasting. The only objection to this mode of ventilating is a possibility that dust may occasionally fall through it into the milk. It ventilates perfectly."

It is so simple in its construction, and can be at

tached to either of the complicated.

It is a whether cheese or am of the cheddar. When w principle being clo But it is of the se old way. ready fo yet mak for them

In anco culture. ers, it w country. the seed pressed f the refus for feedi as follow

Dairyri ing of m months of oil ca believe during l

Owning of which the writ cotton-st rial was St. Loui eral busi then fill become c poured c whateve ing, grea in order follows i The con were per quired f result at and feed May.

in the d of oil ca results, always u When fo experim and I w ductio well con regards cannot s produce quantity this pur from the scribed, serves a

Every beans in are the only foc best con also has slow wo Indian c than the barley, cers wh change c ported,



tached to any can, toat no dairyman can object either to the expense or the fact of its being complicated.

It is a question with a good many cheesemakers whether to adopt the cheddar process of making cheese or stick to the old method. For my part, am of the opinion that it would be advisable to cheddar the early part of the season at all events. When well and properly made on the cheddar principle, the cheese are of a more uniform texture, being close, and in good condition for carrying. But it is a question with me whether the last half of the season would not be as well made up the old way. At all events, get your early cheese ready for market as soon as you can do so, and yet make a good cheese. Take the market price for them and let them go forward.

**Stock and Dairy.**

**Oil Cake for Milch Cows.**

In another column will be seen an article on flax culture. Were it generally cultivated by our farmers, it would, we believe, be of great benefit to the country. The fibre is itself valuable, but it is to the seed we look for the greatest benefit. The oil pressed from the seed commands a high price, and the refuse in the form of oil cake is highly prized for feeding purposes. A dairyman in Ohio writes as follows of oil cake for milch cows:—

Dairyman in this vicinity, where continued feeding of milch cows is requisite from five to seven months of the year, who have not tested the virtue of oil cake as an economizer in fodder, can scarce believe how profitable its results are, especially during long, cold, severe winters.

Owning about forty cows several years since, all of which were stabled during the winter season, the writer's attention was called to the value of cotton-seed oil as an economizer of fodder, and a trial was given it, a ton or two being purchased at St. Louis and shipped to Toledo in January. Several bushels were thrown into a barrel, which was then filled with water; and when the oil cake had become dissolved, about a quart of the fluid was poured over the quantity of middlings, cut hay, or whatever fodder was given each animal at one feeding, great care being taken not to give too much, in order not to cloy the appetite—a result which follows if caution is not observed in this respect. The consequence was that the cows grew sleek, were perfectly healthy, gave more milk, and required far less feed than before; a very desirable result at that time, as the winter proved a long one and feeding had to be kept up until the middle of May. So long as I continued to remain engaged in the dairy business I never again gave up the use of oil cake, using it in the same manner, with good results, although I prefer the former, but would always use the latter when that is not attainable. When fodder is scarce and dear the value of this experiment is great indeed, especially in winter; and I would advise all who are engaged in the production of milk for city markets to give it a trial, well convinced they will not regret it. So far as regards an increase in the quantity of cream, I cannot say from experience, though it is alleged to produce cream of better quality and of increased quantity. Those who sell milk and keep cows for this purpose, cannot fail to derive great benefit from the use of oil cake in the manner above described, as it is a saving of money, while it also serves as an aid in making it.

**Horse Feed.**

Every good groom knows that sound oats and beans in due proportion, and at least a year old, are the very best food for a galloping horse—the only food on which it is possible to get the very best condition out of a race-horse or a hunter. It also has recently become known that horses do slow work and get fat, indeed too fat, on maize, Indian corn, which is frequently one-third cheaper than the best oats. In the East, horses are fed on barley, and it is a popular idea with English officers who have lived in Persia and Syria that the change of food from barley to oats often, when imported, produces blindness in Arab horses. Now,

although no men understand better or so well how to get blood horses into a galloping condition as English grooms, they do not, and few of their masters do, know the reason why oats and beans are the best food for muscular flesh on a horse. The agricultural chemist steps in here, and makes the matter very plain, and shows that if you want pace, Indian corn, although nominally cheaper, is not cheap at all. When we feed a bullock, a sheep, or a pig for sale, after it has passed the store stage we want to make it fat as quickly and cheaply as possible; but with a horse for work, the object is, give him muscle—in common language, hard flesh. There are times when it is profitable to make a horse fat, as, for instance, when he is going up for sale. For this purpose an addition of about a pound and a half of oil-cake to his ordinary food has a good effect. It is especially useful when a horse that has been closely clipped or singed is in a low condition. It helps on the change to a new coat by making him fat. A horse in a low condition changes his coat very slowly.

When from any cause there is difficulty in getting a supply of the best oats, an excellent mixture may be made of crushed maize and beans, in the proportion of two-thirds of maize and one of beans, which exactly afford the proportions of flesh-forming fat-forming food. Bran is a very valuable food in a stable for reducing the inflammatory effect of oats and beans. Made into mashes it has a cooling and laxative effect, but used in excess, especially in a dry state, it is apt to form stony secretions in the bowels of the horse. Stones produced from the excessive use of bran have been taken out of horses after death, weighing many pounds.—*London Live Stock Journal.*

**Important Shipment of Cattle and Horses to England.**

The *Turf, Field and Farm* (New York) of a recent date, reports the exportation of a cargo from New York to Liverpool. The shipment is important from its being exclusively a Canadian enterprise, and demonstrating that the United States are not destined to have a monopoly of supplying the home country with beef cattle from the New World. The shipment was made by the Messrs. Spears, of Guelph, and consisted of nineteen head of fat cattle, and twenty-four horses.

The former, the writer says, is worthy of mention, not only on account of the superiority and weight of the animals, but as being the product of the Canadian Dominion. The nineteen head are all grade cattle, principally from Durham stock, a small proportion being crossed upon Devon and Ayrshire stock, and the native cattle of the Dominion. They are all steers, and will average about 2,200 lbs. Two of the lot weigh together over 5,000 pounds. They arrived in this city on Tuesday last, at Stoddard's stables, No. 600 Greenwich street, in prime order, and great care will be observed in their transportation by steamer to their destination at Southampton. We ascertained from the Messrs. Spears that this lot of cattle was bred in the neighborhood of Guelph, Ont., and was purchased at the late Canadian Easter Fairs; held at Guelph and Elora on the 14th and 15th insts. It is the opinion of these gentlemen that this lot of cattle will compare favorably with the best lot of beef cattle that has ever been shipped from the United States to a foreign port, and a thorough inspection of the animals would seem to bear out this opinion. They are not prize cattle, fattened up for market. The carcasses are large, of high stature, and the flesh evenly distributed, presenting an outline of good proportions, almost symmetrical in appearance. The horses are fair specimens of Canadian production, and have been selected with a view to meet a want in the English market for light carriages, landaus, &c. Among the stock are a few roadsters, with sufficient blood in their veins, derived from good trotting families, to render them acceptable for roadsters. An effort to obtain their pedigrees, on the part of our reporter, resulted in his being informed that this portion of the horse stock were descendants of Royal George, Grey Eagle, Erin Chief, Charles Douglas, &c. The only stallion in the lot is a son of Field's Royal George, out of a Toronto Chief mare; he is six years old, and stands about 15½ hands; is compactly built, with good points and plenty of bone and muscle, and will doubtless make a good sire for pony-built stock, such as the English seem to prefer for their trotting contests.

**Crushed Oats.**

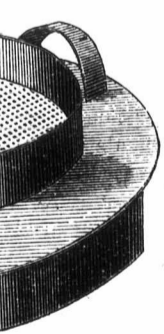
There are persons who have written and talked much upon the vexed question, "Do you bruise your oats?" The feeding of oats whole is for horses in the prime of life and health, that usually crush with nature's grinders the grain more completely than the oat-bruiser. To crush oats for such animals would be attended with evil, for it is a well-known fact that bruised corn does not require so much mastication as when whole, consequently such food would not become so thoroughly insalivated, because, during the act of mastication, a great amount of saliva is poured into the mouth to be mixed with the food; and it is a fact well known to physiologists that unless the mouthful of provender be saturated with saliva, when in the stomach the gastric juices (a secretion present in the stomach), refuse to act chemically upon it, and therefore the first process in digestion is interfered with, and instantly disease supervenes. This fact is made evident to those people who keep horses without food eight or nine hours of the day; on their arrival home they eat so voraciously as to incapacitate them from duly masticating and consequently insalivating their food; and what is the result? an attack of colic occurs, which sometimes terminates in death. This affection was common years ago, but since the introduction of the nose bag cases of indigestion have been less frequent. The horse possesses a small stomach but very large intestines, and consequently the former requires to be constantly supplied with food in order to afford aliment to the latter, and for this reason a horse cannot, with impunity, be kept any length of time without provender. Most young horses masticate their corn, when supplied with plenty of chaff, but there are some who, even under this system, bolt their oats, and certainly, when this is the case, crushed oats are necessary to the well-being of such animals; also colts, in whose mouths the process of dentition is going on, and old horses thrive better upon crushed food. There are many advocates of crushed oats, and as many of an opposite opinion. The gist of the matter lies, however, in a small compass—to determine the best means by which to ensure thorough mastication and insalivation, and consequent digestion of food. That this takes place the observant eye of the owner must detect—"the eye," which is said "to fatten the horse." If oats escape whole in the droppings, perhaps a more plentiful supply of chaff will remedy the evil; if this fail, common sense dictates the use of crushed corn. When nature fails in an operation, she must be supplemented by art; the oat-crusher must assist the horse's grinders.—*London Live Stock Journal.*

**WHAT HORSES SHALL SMALL FARMERS BREED?—**

It becomes a matter of interest to determine what horses it will pay best to breed, especially for small farmers. The land, as I have repeatedly said, is light. Fall ploughing is but little done, and theoretically not advantageous. A good farm mare may therefore do her spring and summer work perfectly well, and have a foal every year in August or September. It seems a great pity that so many horses should be raised, and among them so few that are worth the hay and provender that they eat before they are five years old. Were the Norman, or Percheron, not so violent a cross, it would seem to be the best; nevertheless, I believe experience at the West shows that smallish mares will often have excellent and well formed foals by such sires. The first Percherons ever imported into this country were brought into New Jersey, (the Harris importation). After the importer had used them for some years, "Diligence," the stallion, and "Joan," the mare, with other imported animals and their get, the entire stock was sold out by Mr. Harris, to my neighbor, Mr. John G. Bell. He bred them for some years, and after the death of the old horse, bred old Joan to the imported thoroughbred stallion, "Consternation"—a horse of most amiable disposition for a thorough bred. The cross proved a capital one, and a pair of mares thus bred are famous good ones. They are a handsome, stylish pair of farm horses, and trundle the family Rockway about in good style, and at a remarkable good rate, too.

Several of the cheese factories have been in operation for a week or more in the county of Hastings (April 16th). Should the market prove favorable, dairying will be very largely engaged in there this season.

Within the last few days 3,778 dozens of eggs have been shipped from Belleville over the Grand Trunk Railway to Ogdensburg.



le out of the centre  
at a piece of coarsely  
d giving it a mod-  
Around the out-  
ed a flange of tin  
y milk which may  
asting. The only  
asting is a possibility  
through it into the  
tion, and can be at



### Sale of Shorthorns at Bromley Hall, England.

In the *Agricultural Gazette*, England, of March the 12th, we have a full report of the first two sales of Shorthorns, held March 7th and 8th. This being the opening of the Shorthorn campaign of 1877, it must be of more than usual interest to our readers. The *Gazette* says:—

Mr. Thornton held his first Shorthorn sale this year on Wednesday last at Mr. E. T. Tunnicliffe's, of Bromley Hall, Staffordshire. The sale of Shorthorns was not a large one. Thirty-four animals were catalogued, but scarcely half of them were eligible for entry in the Herd Book. Mr. Tunnicliffe had a sale eighteen months ago, at which the larger portion of his herd was disposed of, and he reserved from this sale, and still retains, six or eight of his best cows and heifers. The horses, Shropshire sheep, and pigs, etc., were disposed of by another auctioneer in the course of the day. The company was very large, but consisted almost entirely of local farmers. The weather was extremely cold and stormy. Most of the cattle were of good local sorts, crossed with high-class Bates' bulls; anything good made quite its value. Lot 4, a good cow 14 years old, with only three crosses of registered pedigree, sold for 37 gs.; a number of cows with two crosses made about 30 gs. each; a Kirklevington heifer (whose dam was purchased at the late sale for 240 gs.) was sold for 72 gs.; two heifers of Mr. Tunnicliffe's favorite Duchess family under two years old, sold for 36 gs. and 37 gs. each; two of the same tribe, still younger, sold for 25 gs. each; a number of promising heifer calves in moderate store condition realized about 20 gs. each, they were by Duke of Bromley 3rd, and Duke of Bromley 2nd, two good bulls, sons of Colonel Gunter's 2nd Duke of Wetherby; a bull calf by one of the above sires made 40 gs.; two others 24 gs. and 26 gs. Duke Bromley 2nd was let for the year for 22 gs. So far as a sale of this kind can be a guide as to the actual state of the trade for Shorthorns, it must be held to be fairly satisfactory. There are still plenty of customers for useful-looking Shorthorns at good, though not extravagant prices. There is still plenty of inducement to farmers who have a herd of well-bred though not full pedigree Shorthorns, to use only bulls of good quality and breeding, whose pedigree can be registered and thus lay the foundation of a pedigree herd.

The following are the prices obtained above 20 gs.:—Fidelity, 26 gs.; Duchess 3rd, 37 gs.; Roan Neck, 25 gs.; Blanco 2nd, 36 gs.; Milk Girl, 21 gs.; Duchess 17th, 32 gs.; Kirklevington 8th, 72 gs.; White Face, 25 gs.; Milkmaid 4th, 29 gs.; Duchess 22nd, 37 gs.; Duchess 23rd, 36 gs.; Duchess 24th, 25 gs.; Duchess 25th, 25 gs.; May Dew, 33 gs.; Duchess 30th, 22 gs.; Duchess 33rd, 27 gs.; May Duchess 15th, 23 gs.; Duke of Bromley, 21 gs.; Duke of Bromley 9th, 29 gs.; do. 10th, 40 gs.; do. 11th, 26 gs.

#### MR. J. B. JENKIN'S SALE.

This sale is reported as satisfactory, the bidding being brisk. The cattle were reported as in very moderate condition. Thirty-seven females sold at prices varying from 20 to 87 gs., many of them going at 30 to 60 gs. Five bulls sold at 30 to 43 gs.

### American Beef in England.

"The roast beef of Old England" has been a national boast for many years, but it has become so costly that a large proportion of the people knew but little of its flavor. Recently, enterprising Americans have arranged to send large quantities of beef by steamers from New York. The cooling process is so perfect on board the vessel that there is an arrival, every two or three days, of an immense quantity of this beef in fine condition. At first the dealers attempted to decry it as unfit for use, and, by combining, only bid 7 cents per pound for it when offered at auction. A host of private parties rushed in and bought it at 10 and 12 cents, temporary sheds and booths were hastily erected, and the meat is offered at retail at from 12 to 18 cents. It is amusing to see the crowds which gather in hundreds, after a fresh arrival, and struggle for an opportunity to carry off a supply. One of these places will dispose of 100 to 200 quarters in a single day, and the people stand and look anxiously at the shop after it is all gone. The price of similar beef has long been from 20 to 25 cents per pound, and the new supply is a great boon to the working classes. American flags are

flying, and the letters U. S. A. blaze in gas-light over the doors, and the people bless the Yankee ox for his savory addition to the English table. Good judges pronounce this beef of most excellent quality, and I am glad to say it surpassed anything in that line which I have eaten in seven years. The voyage of ten or twelve days renders it tender and juicy, and if the supply does not fail there will be no limit to the consumption.—*London Letter to Boston Paper.*

### Foot-Rot in Sheep.

As far back as 1833 I had a flock of 800 sheep on my homestead at Weighbridge, one-third of which were inoculated and lame. This was the first appearance of disease in that quarter; but by prompt attention and perseverance, the disease was mastered and the sheep all cured in a very short time, by judiciously paring the hoofs and applying a solution of vitriol water to the foot of every animal twice each week, and removing the sound from the lame ones into fields not infected previously.

It is shiftlessness and sheer negligence on the part of shepherds to allow the foot-rot to remain, summer and winter, among their flocks, causing the neglected animals so much pain and suffering. The vitriol wash should be applied while warm, and the most effectual mode would be to dip the feet down into the liquid. It is more easily cured during the cold winter months. Freezing weather destroys the inoculating properties when dropped upon the ground. But during the warm months infected matter may remain a long time in the sheep walks and not lose its vaccinating qualities. Due diligence, and applications well applied, will cure any infected flock on the farm. I have treated thousands in this manner; usually placing the sheep in a trough, or box, on its back, about twenty inches above the ground, to hold the animal and facilitate the work. This foul disease and scab were imported into the United States from Germany at first. The Saxon merinos were impregnated before landing on our shores. There is no estimating the damage it has entailed upon the flocks of this continent.—*S. W. J., in N. Y. World.*

### Cattle Food.

Experience teaches us that cattle—says the *American Cultivator*—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 the concentrated food being only profitable so far as the animal assimilates it, beyond that 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 his 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 corn-meal, while mutton requires great variety of food, and beef cattle would become cloved and diseased with its exclusive use. A thoughtful attention to these broad facts will change much injudicious feeding into cheaper meat production.

One element in the economy of cattle-feeding, the use of straw as fodder, has not received the attention its importance demands. On no one point is the average farmer so incredulous as regarding the value of straw to feed, and on many farms the wasteful practice still exists of turning all the straw into the manure heap. If properly made and reasonably well cared for, a large portion of the straw, especially of the oat crop, should be used as cattle food. Early-cut straw is worth for feed two-thirds as much as hay, and is three times as valuable in feeding cattle as in the manure heap. Pea haulm and bean straw, especially if in the latter the pods are attached, are of still greater value. The best heat-producing foods are wheat, corn, oats, hay and bran; oat straw will develop as large a percentage of heat as oil-cake; bean straw even more; and in this respect, one hundred parts of oat straw are equal to eighty parts of hay. Straw is deficient in flesh-forming material, requiring one hundred parts oat straw to equal sixteen parts good hay in this particular; yet, fed with cotton-seed or linseed cake, it supplies what they lack in heat-giving and respiratory elements.

For the purpose of feeding out oat straw, our oat crop is allowed to over-ripen, a large amount of

its nutriment being lost without any corresponding benefit to the grain, which never improves after the upper portion of the stem has commenced turning yellow. Oats cut when just turning from the green state, yield more grain as well as greater feeding value in straw. The narrow margins of profit in cattle-feeding in this section of the country demand the closest economies in the food supply, and the most thorough investigations and experiments with an article of so little present market value, and one of such abundance with most farmers as oat straw.

### Measles in Pigs.

Pigs are subject to a disease called measles, which is believed to render the flesh unwholesome. The measles is very prevalent, though seldom fatal; and if not checked, affect the grain of the meat, which may commonly be seen in the shops—of a faded color, and the flesh punctured, as it were, with small holes. The commencement of the disease appears in languor and decline of the appetite, followed by small pustules in the throat, together with red and purple eruptions, more distinct after death than during the life of the animal. By aid of the microscope, it has been ascertained that the measles is a larval cestode, or in other words, one of the sexually immature stages of development of a tape-worm (*Tenia solium*), a frequent human guest, derived from eating underdone pork. Swine, whose habits are less cleanly than those of horned cattle, do not enjoy the same immunity as these, and in them the measly condition may assume abnormal proportions. On the other hand, swine will undergo a larger amount of parasitism without displaying those external evidences of suffering which other animals are apt to betray under similar circumstances. By the aid of a microscope, or with the assistance of a powerfully magnifying pocket lens, the distinctive characters of the various meat and pork measles may be readily made out. Indeed, the naked eye is, in most cases, sufficient to determine the nature of the spots and specks in meat and pork.

It is idle to talk of cure in a disease of this nature. Generally speaking, even if the animals be in health, a small quantity of nitre and sulphur, occasionally mixed up in their food, besides stimulating their appetite, will frequently prevent disease; neither can we too much insist on cleanliness, nor upon the punctual regularity of feeding at stated times. This injunction, if followed, will do more for the preservation of health in pigs than the administration of any specific, after disease has decidedly shown itself.

### What Constitutes Perfection in a Shorthorn?

At a meeting of the Pentrit Farmers' Club, Mr. George R. Heddy, Newcastle-on-Tyne, read a paper in which he introduced the following tabular statement:—

The first essential in a Shorthorn was a straight back from shoulder to tail. Then when he came to the neck he would also know that of the male required to be thick at the base, that it should taper along the sides and rise on the top towards the head. That of the female should be fine and long, and on a plane with the shoulders and the back. The sides of each animal should be as near the form of the sides of a barrel as possible, the ends of the barrel being the foremost parts of the thighs. The legs should not be much crooked, and the head should be strong and massive, covered on the front with long shaggy hair; that of the female tapering clean and fine. The eye of both should be prominent, and those of the female soft and placid. A judge would always pay difference to thickness of flesh, and there were cases when a little fault in complexion and outline might be overlooked for a great desideratum. The skin in the best breeds would always be found to be soft and springy, moderately thick, and clad with long, bright, silky hair. If there was a doubt as to supremacy of quality, that with the finest hair and most pliable skin along the top of the loins and hoods should be placed first.

Any deviation from a gentle curvature in the horn was to be eschewed, and the fashionable color in the horn was yellow and crimson in youth and white in age. His proclivities went in the direction of strong horns, instead of short ones, as a mark of constitution; and as to the mouth, he considered it should be rather large, if it had to feed a capacious frame.



## Garden, Orchard and Forest.

## Hot-Bed Plants.

The difficulty of getting plants of any kind to take root and do well when transplanted from a hot-bed, or even cold frame is well known. Even with the most anxious care with spading and watering, there are many failures. The plants are not hardy enough, and they need to be better rooted.

The following extract from the New England Farmer offers some good suggestions on the subject.

In re-setting plants, especially the tomato, they should be placed with half the length of the stems under ground, when new roots will push out from all that portion which is under the soil, and thus increase the proportion of the roots of the plants, and consequently enable them better to withstand their final transplanting into the open soil. A hot-bed plant which has never been transplanted, is not worth ten per cent. of the price of one which has had its roots broken, and has been re-set two or more times. By breaking roots, we increase the feeding power of the plant may fold, as every broken root throws out many new roots at the end of the old stub, or, as in the case of the tomato and some other plants, pushes out new roots from the stem, if it is set a little deeper, or hilled up by drawing fresh dirt about the stem. After the plants have been transplanted for the last time, in the beds, and have become well rooted, the sash should be open as much as is safe, that the tops may become hardened to the weather. Some ignorant people will buy only plants with large tops, but those who know what a good hot-bed plant is, will look more to the roots and less at the size of the tops. Plants should be as short and stocky as possible, and the foliage should be of a dark-green color, and the stems should be solid and woody. Such plants will produce fruit much earlier than tall, slender, soft ones, which have been forced to a large size by too much heat and too little air. Many fail by crowding the plants too quickly in the beds. A plant needs sunlight on every part of the top at some time during the day, and as a dozen good, well grown, hardy plants are worth more than a hundred poor, sickly things, it is better to aim for the best that can be grown.

## A Small Herb Garden.

The *Villa Gardener* has these hints, which, if followed out, in whole or in part, would add greatly to the attractiveness and utility of American gardens:—

There is poesy and savoriness in the very name. There may be likewise order and beauty in it. The most unsatisfactory things in gardens, especially small ones, are the herbs, scattered hither and thither all over the place, and time and patience are exhausted in hunting them up when required. Quite a useful feature might be made in every garden, however small, of the herbs, were they only brought together into one place and arranged in order. The best disposition for herbs is in beds. These may be from two to four feet wide, with foot alleys between them, and the length almost double, or, at the least, one-third more than the width. This arrangement in beds is the very essence of an herb garden. Of course, in small gardens one entire bed will not be needed for any herb. In such cases several kinds may be easily grown together—such, for instance, as common and lemon Thyme, Pennyroyal and Majoram in one; Fennel, Sage and Tarragon in another; and Basil, Summer, and Savory and Golden Purslane in another. Mint should always have a bed for itself, as mint sauce is much in demand. Chervil, again, is much wanted in many families for salads, also Burnet, Hyssop, &c. These three are the semi-cordial herbs: Hoarhound for sore throat, Tansy for tea (not that anybody ever drinks it), Camomile for face-ache and stomach ailments. Rue for the gapes in poultry, Lad's Love, and any curious herbs that the villa gardener may have a fancy for.

A bed should also be reserved for Angelica, used by those who know the luxury of its shoots, candied in sugar, and for the growth of Borage, for flavoring claret cups in hot weather. Again, the herb garden is just the place for the orderly and systematic cultivation of all small saladings, such as Mustard and Cress, a constant succession of young Onions, a bed of Chives, the cultivation of Radishes throughout the season, and the growth of Rampion, Lettuces, Endive, &c. All this would

find abundant furniture for a good many beds, and by changing these for the different products a nice succession of cropping might be maintained.

Finally, several beds should be set apart for the high class cultivation of Parsley—a plant sadly neglected in small gardens. Nothing is more useful in a household for flavoring or garnishing, and it is just as easy, on a right system, to have magnificent leaves, exquisitely curled and clean, because raised high above the ground by their strength and stature, as to have and use the small, dirty leaves that have to do duty as parsley in so many houses. Let the parsley have a bed of rich, deep soil—if a yard deep all the better; sow a good curled kind thinly; as soon as fairly up thin the plants to a foot apart, and let them grow away freely. That is the whole art of growing and using Parsley and making it really one of the most beautiful plants in the garden. Sow in March, May and July for succession. If the garden of herbs is too small for the devotion of one or more beds of Parsley, sown at different seasons, then the whole herb garden might be fringed round with Parsley, and the garnishing and flavoring plants themselves be garnished with its beauty. No portion of any garden, large or small, not even excluding that wholly devoted to flowers, will afford more pleasure than an herb garden, well furnished and kept. There will always be something growing and doing in it.

## A Propagating Secret.

A month or two ago we alluded to an alleged extraordinary secret for propagating trees and grafting roses, whereby much time could be saved, offered for a small sum by an American nurseryman. This gentleman has since communicated an article on the subject to the *Wiener Gartenfreund*. Briefly, his method is as follows: Cuttings of shrubs and trees are taken off at the beginning of July, from 6 in. to 12 in. long, according to the kind. The leaves are removed from the lower portion which is to enter the ground, but those which will come above ground are left. Beds are prepared for them in the open air by thorough digging and levelling, and afterwards applying a superficial layer, about 2 in. thick, of rotten manure from a spent hot-bed. The cuttings are then stuck in about 2 in. apart and in a somewhat oblique direction. Each bed when filled is surrounded by a lath fence, so that shade may be given when the sun is very hot, and the cuttings are well watered with a rose-spouted can. This completes the operation. The only further care necessary is a sprinkling overhead three or four times a day during the first week, if the weather be very hot, and once a day afterwards. In the course of five or six weeks, treated in the manner indicated, the cuttings of most plants will have formed a callus, and further shading will be unnecessary. Late in the autumn a layer of rough manure, 2 or 3 in. thick, is spread over for winter protection. It also serves as manure when the cuttings start growing in the spring; and cuttings treated thus make extraordinary progress—forming plants equal to two-year-old plants from winter or spring cuttings. Very few, it is asserted, fail. The new method of grafting roses is the insertion of growing eyes early in spring, instead of dormant eyes in the summer. They are inserted in the main stem, one on each side, to form symmetrical heads. These make, it is said, as much growth the first season as the dormant eyes the second season.—*London Gardener's Chronicle*.

An occasional change of soil is highly beneficial to flowers in pots. There is nothing better than surface soil from an old pasture, taken off about two inches deep, and thrown into a heap with about one-sixth part old hot-bed manure to partially decay. In addition to this staple item, smaller quantities of different matters should be gathered together for peculiar cases or particular plants. Peat, for instance, will be found very useful for many kinds of plants. This is not, as is often supposed, mere black sand, but a spongy, fibrous substance from the surface of bogs and boggy wastes. Sand should be collected sharp and clean; the washings from turnpike ditches are as good as anything. Leaf mould is best got already well decayed from the woods. That one makes for himself from rotten leaves is seldom good for anything; it is always sour, and seems indigestible to vegetation. A load or so of well decayed cow manure is a good thing for the gardener to have by him, as those plants that want cool soil prefer it to any other manure.—*Gardener's Monthly*.

## Artichokes.

I have grown the unjustly abused Jerusalem artichoke for years, and do not know of another crop that gives as large and as sure a return for the amount of labor and land expended. Last spring, when planting potatoes, the soil at one end of the field was considered too poor for them, and I decided to drop Jerusalem artichokes in the eight remaining furrows in exactly the same manner as the potatoes. They were plowed and hilled simultaneously with the latter, but received no hoeing and required no bug killing. The yield of the artichokes, covering 3,500 square feet, or about one-twelfth of an acre, was 20 bushels of fine, large tubers, while the adjoining 60 rows of potatoes, covering 30,000 square feet, yielded but 18 barrels of medium-sized potatoes. Had the entire farm been planted with artichokes, the return at this rate would have been 185 barrels. I have heard it recommended to top the stalks so as to prevent their blossoming, agreeable to the theory, I presume, that the sap which would otherwise be expended in developing the flowers and ripening the seed, would add to the growth of the tubers. To satisfy myself as to the correctness of this theory, I topped two rows just at the time when the first flowers appeared. These two rows were dug and measured separately, and the result was that each of the two rows yielded one-half a bushel less than either of the adjoining six rows, which were allowed to develop their flowers and seeds.—*Moore's Rural*.

## The Cherry.

BY F. R. E., IN THE OHIO FARMER.

**Cultivation.**—In nursery rows the earth, in spring, should be first turned away from the trees; in about ten days it should again be stirred with a fine reversed-toothed harrow, and left nearly level, and so kept throughout the growing season. In October it should be turned up toward the trees. The plants budded the year before, and of course, having the stalk cut back in early spring to within six inches of the bud, as soon as it commences to swell strongly, should have the bud growth secured to the stalk by a soft band, until it reaches a height of eight inches; then the stalk should be cut away just level with the inside base of the bud shoot, and sloping downward. The shoot should then have the end pinched down to a bud likely again to make the leading shoot; sometimes this bud is found at the terminus of the shoot, again it will take away two or more buds; but it is the first formation of a true head to a future healthy cherry tree. The second year, if there is a desire to have trees with the first tier of branches two or three feet from the ground, the lower branches should be cut away close to the main body as early as the buds begin to swell. No tree should remain in the nursery row after two years' growth from bud. Once transplanted into the orchard or garden for future growth, they should have the ground, six feet in diameter around the tree, lightly mulched with cut straw, chip dirt, half decayed leaves, or small stones, and often stirred with an iron-toothed rake. This same course should be pursued the second year, when it will be well to let orchard grass take the ground surface; cut it when four inches high, and leave it on the ground. If trees do not make eight to ten inches growth upon leading shoots yearly, then some manure should be applied to the surface early in autumn, and thoroughly forked or raked into the ground in early spring, and the same practice continued until the terminal buds of the year's growth have formed. This period, of course, will depend upon the latitude, situation, soil and season.

**Pruning and Training.**—Under the heads of cultivation and transplanting I have attempted to show how the heads of the trees should be formed, but there is much more that comes to the knowledge of a careful and profitable cherry tree grower.

The sweet cherry, grown as a standard or dwarf, needs little pruning except when neglect has permitted one limb to grow and cross another when it could have been readily rubbed out in the bud, or pinched back and made to create spurs. If this has to be done upon trees that have been neglected, then the best time to do it is just as the terminal bud of the year's growth has ripened. If the tree has been placed in too rich a soil, and is disposed to grow too rapidly, dig around a tree of say four inches in diameter a circular trench three feet distant from the body of the tree, and two feet deep, cutting off with a sharp spade every root and fibre outside that space. And to every inch of diameter, up to a tree twelve inches through,



add four inches distance of trench from tree. Often the top of the tree will also require pruning so as to give it a round head, as of an acorn based on the circle of the trench. The Dukes and Morrelios need somewhat more pruning than the sweet varieties, but all are impatient of the knife; yet if to be done, let it be done in July, or when the terminal buds are forming. Dwarfs may be, and are, trained to please the fancy of growers, and mostly by the "pinching-in" process. As they grow with extreme vigor on the Mahaleb, for three or four years, they require not only to have their tops pruned, but also to be root-pruned annually. If possible to be avoided, large branches should never be cut from a sweet cherry tree. I have examined the results of many cases where large branches were cut away in spring for the purpose

**Rhodanthe Manglesii.**

PRINCE BISMARCK.

This is a new, double, pink and white everlasting, recently brought to our notice by one of the leading English seedsmen and florists of the highest reputation. Like all new plants and seeds, it is a great price, and most highly spoken of. Most of our readers know what nice bouquets and handsome ornaments these everlastings make, especially when mixed with the ornamental grasses. These plants require about the same treatment as balsams, stock and asters, that is, to raise the plants in a hot-bed or in a box in the house, then plant out about the tenth of June.

Snapdragon.—Of this flower there are several varieties. It is a good flower for a border; flowers white, bright red, rich crimson and variegated.

St. Burnos Lily blooms in June, July and August; will grow freely; flowers orange yellow.

Wallflower.—Of this general favorite there are several varieties. No common flower is more generally admired, for its agreeable perfume as well as its variety of color. It does not grow here as freely as in Great Britain, but it can be raised with a little care, and is worth all the trouble.

Chrysanthemums.—Of this greatly admired flower there are not less than 200 varieties, of rich and rare hues. To grow them in perfection they



RHODANTHE MANGLESII.

of changing the tree to a different variety by grafting; the result has almost invariably been death after two summers. When necessary to be done, the wound should be covered with grafting composition or gum shellac, to exclude the air, and the body wrapped in straw or matting. Encasing the body during winter and spring months with straw, paper, cloth, or moss will often prevent injury; for the cause of bursting of bark is in winter, not summer months, although often it does not exhibit itself until July or August.

Fresh cow manure dissolved in water, it is said, will kill the bugs on all kinds of bed plants. Sprinkle the plants morning and evening.

**The Flower Garden — Perennial Flowers.**

No flower garden is complete without a good selection of perennials. Annuals bloom but for a season, and that season in Canada a short one. Perennials are hardy, many of them blooming for years. We will merely give a selection of a few of our favorites. They are easily grown and very handsome, and their bloom continues through a comparatively long period.

The Spring Adonis grows freely in any common garden soil; it flowers in April and May; large yellow flowers.

require rich, light soil. About the 1st of April the roots should be taken up and divided into fresh soil. By planting not more than two or three stems together, the flowers will be larger, more double and of richer color. They are in bloom from the first of October till the first severe frost.

Pink, Carnation and Sweet William all are of the same species, the Dianthus. Without these, our old favorites, the flower garden would seem wanting much of its fragrance and beauty, even if blooming with the choice treasures of florists. They are hardy, and will stand the severest cold, though to have them perfect in their beauty some varieties should be protected in frames during win-

ter. They midsummer season.

Lychnis. esteemed; double var transplant

Phlox.— and contin eral vari

garden is a rich, lig

Primros flowers, P thus, are delightful than a sun pastures d the comm the double descended roses, Co worthy a

London acquainta

It is one family, th flower is work. V list, not modest fl the Heart of delicio and purp sandy loa

A Some o us to f houses, b just such suit all a take a gr the plans the next It has co

trate th of our a front el plan of buildin cellar n whole b Two second



ter. They are easily propagated by layers about midsummer. Of this we purpose to speak in season.

**Lychnis.**—For the borders this flower is greatly esteemed; the scarlet and the white, especially the double varieties. They require to be frequently transplanted.

**Phlox.**—A very handsome flower; blooms early and continues in bloom till frost. There are several varieties. The general rule for the flower garden is applicable to the Phlox. It delights in a rich, light soil.

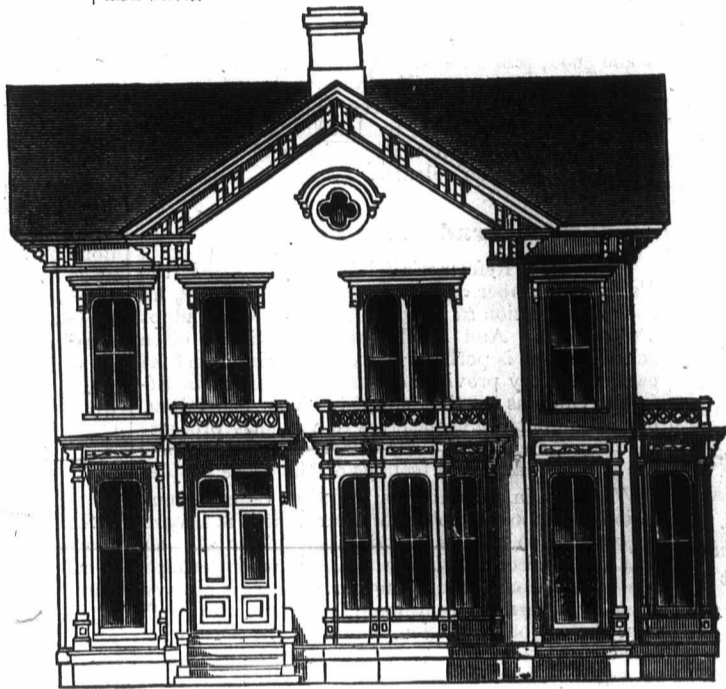
**Primrose (Primula).**—The favorite flowers, Primrose, Cowslip and Polyanthus, are of the one family. No more delightful scene lingers in our memory than a sunny Primrose bank and the rich pastures dotted with Cowslips. From the common Primrose have originated all the double varieties; from the Oxlip are descended the Polyanthuses. All—Primroses, Cowslips, Polyanthuses—are worthy a place in any pleasure ground.

**London Pride,** were it but for old acquaintance sake, must not be omitted. It is one of a hundred species of one family, the Saxifrage. This pretty little flower is especially valuable for rock work. **Violet.**—Though last in our brief list, not least admired is this sweet, modest flower. Of the varieties, including the Heart's-ease or Pansy, give us those of delicious fragrance, white and blue and purple. Their favorite place is a sandy loam and a little shade.

**A House and Plan.**

Some of our subscribers have asked us to furnish them drawings and plans of houses, barns, horses, implements, &c., &c., just such as they want. We cannot always afford to suit all as soon as they may wish, as engravings take a great deal of time to prepare them—first the plans; then the artist's work, first to draw, the next to cut—and artist's work is expensive. It has cost us many thousands of dollars to illus-

in the peak of the rear roof, and turns in over the dining-room closet. The stairs to cellar lead down from the rear hall. There is a reservoir tank placed under the rear roof, above the pantry, and supported by the studding, which rests on brick walls below. The tank is four feet by seven, and is four feet deep. It is lined with sheet lead, and is filled by a lift and force pump, placed on the sink table. There will be a thirty-gallon boiler attached to the cooking stove, and supplied from the tank. Hot and cold water will be delivered at the sink, wash bowl and bath tub. The tub will be enclosed by doors, which can be closed for a shower. The wash bowl will have marble top and back.



FRONT ELEVATION.

The family sitting-room has an open fire-place, which can be used for wood or coal fire, and a most excellent thing for the health and comfort of the family. This room will be peculiarly cheerful, with its open fire and fine bay, with the dining-room and nursery so convenient of access.

Each of the chambers has a fine clothes press, and the front chamber has an alcove for bed over the front hall, a neat arch, (represented by the dotted line, continuing the line of wall over entrance to alcove. All of the windows, except those of cellar, are provided with inside blinds, the windows opening on porches extend nearly to floor.

The main entrance has outside and vestibule doors, one of the outside doors being opened, as shown by the elevation. There will be balconies over front steps, and each of the bay windows.

The arrangement of rooms, etc., will be found convenient, and the outside, although plain and unpretentious, will be quite pleasing to the eye.

**French Letter to American Farmer.**

**FARM-YARD VS. COMMERCIAL FERTILIZER.**

In the debate relative to farm-yard versus commercial manures, one element is overlooked, viz.: that no uniform application of either fertilizer is possible. Flanders owes most of her prosperity to the intelligent preparation and application of farm-yard manure, for the soil of that country is silicious and naturally poor. Schloesing maintains that the organic matters—humus in a word—act as a cement in the case of light soils, and Risler believes, in concert with carbonic humic acid, decomposes the silicates. Saxony possesses a soil much resembling that of Belgium, and barley and rye are the chief crops cultivated, the climate being dry. To keep up the fertility of their soils, the Saxon farmers employ much bone-dust, guano, superphosphates, &c., but in a specially associated manner. When the rye is in flower, yellow lupine is sown; at reaping time, the lupine has well taken root, and grows vigorously after the rye has been removed. When the plants are in flower, generally about August, they are ploughed in, the commercial manures distributed, and the soil, thus prepared, is re-sown with rye. In dry climates and for light lands this mode of manuring is to be recommended.

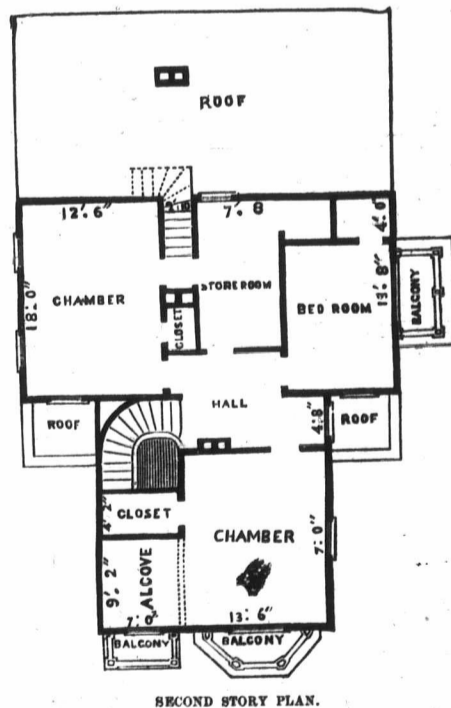
**PARSNIPS FOR HORSES.**

In Bretagne, horses are fed on parsnips instead of oats, and no complaints are registered as to falling off in condition. M. LeBian feeds his carriage horses exclusively on parsnips, and the animals that he now exhibits in Paris are superb. He gives each horse 40 pounds of the roots daily, distributed in three feeds; the expense of cultivating one cwt. of parsnips is one franc, so that the daily ration of each horse is about seven sous; now 14 pounds of oats a day cost twenty-nine sous, or four times dearer.

**VALUABLE FACTS ABOUT MILCH COWS.**

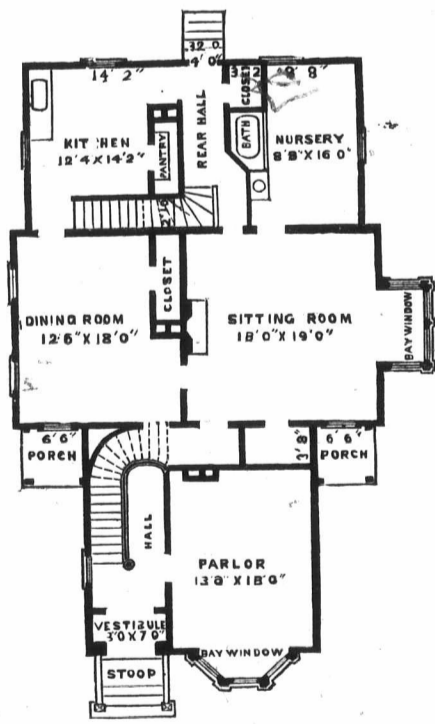
It is commencing to be a recognized truth with farmers, that to possess good milch cows, they must be maintained in a good condition. Some do not hesitate to recommend rations as liberal as are given to fat stock. It is known that the yield of milk and butter increases with the opening of the season for green fodder, and hence the secretion of the mammary glands becomes augmented. The green food does produce more milk, but not any action on the glands. The difference resides in the azotized, or albuminous matters, being more digestible in the form of green clover, lucerne, etc., than in that of hay, straw, husks and roots. The winter rations are relatively poor in blood-forming materials,—that is to say, nutritive matters. A large quantity also of the albuminous matters of hay and straw are not utilized by the organism, not being dissolved by the digestive tube, as the nutritive substances are contained in cells, whose coats are rebellious to the action of the digestive juices. The more the forage is tender and young, the more the albumen is soluble and assimilable, the more blood is formed, and consequently the greater the secretion of milk. In winter it is evident that if the yield of milk is to be increased, an augmentation must take place in the food calculated to form it, and the animal maintained in a satisfactory condition without being fat.

The *Strathroy Despatch* says:—On April 16th, a car load of potatoes, 400 bushels, was shipped from this market by the G. W. R. to Washington. It was the first load of potatoes ever shipped from Strathroy to the Capital of the United States.



SECOND STORY PLAN.

The *New England Farmer* (April 14) says:—“Large numbers of French Canadians are leaving the Provinces for the United States. Two hundred have gone from the neighborhood of Richmond during the past two days.” [We are informed by the Immigration Department for the Province of Ontario for the year 1876, that the expenditure on the account of Immigration during the year was \$43,563.01. We place these two reports in juxtaposition.]



FIRST STORY PLAN.

trate this journal. Our desire is to satisfy as many of our applicants as we can. We now give you front elevation and plans of a neat small house, the plan of which can be enlarged if necessary. The building may be built of either frame or brick. A cellar may be put under the kitchen or under the whole building.

Two flights of stairs lead from the main to the second floor. One from the kitchen gets head room



## Correspondence.

## An Englishman's Ideas of Canada.

SIR,—Having now been in Canada for almost two years, and coming from the dairy county of Cheshire, England, and having traveled several times over almost the whole of the country, I may be entitled to be an authority as far as I may explain my views and ideas.

During my first tour from Montreal to the Falls, Goderich, &c., I was completely astonished to find such beautiful towns as Brockville, Belleville, and such other similar towns further west; my opinion, the same as the rest of individuals in England, was, that the towns situated on the river and lake shores were but merely cleared in the shape of a horse shoe, and that all the inhabitants in the same resided in log huts; that you had not such good roads (for a new country), formed with such clean and substantial side-walks; and when a farmer went to cultivate, &c., his little patch, that he had to take his rifle and revolver with him to defend himself from an attack of the Canadian Indians. This supposition being very prevalent in the Old Country has been the means of deterring hundreds of well-to-do agriculturists from coming out to Canada, hence the reason of so many preferring to go to Australia, New Zealand, &c. Your emigration agents in England are chiefly to blame for the great ignorance of Canada in England. I know lots of farmers' sons over there who have money and who are waiting for a farm to be let on the estate on which they have been reared; did they know as much of Canada as your correspondent they would be out here the first spring that they could get and settle upon a 200 or 300 acre farm, and be able to stock it with their own means that they are already possessed of. They are young men who have had a first-class agricultural training, and would soon prove themselves an honor and blessing to the country; this is the class that Canada is in want of and must have sooner or later; this would be the case if the emigration agents were to visit small country towns and villages, engage the school rooms, and give a wide illustrated lecture upon the climate and the agricultural standing of Canada, instead of parading the streets of London, and other large cities, with their kid gloves on, and merely walking to and from the Colonial Office.

I myself am of an inquiring turn of mind, and frequently made enquiries respecting Canada, but I never heard of such places as Toronto, Ottawa, London, Guelph, &c. Montreal and Quebec are only commonly known in England as Canadian cities.

Should I ever visit the Old Country and truthfully tell my agricultural friends of my experience of Canadian agricultural resources, &c., they would not believe me.

They have no knowledge whatever of the very kind treatment and assistance that is given to the emigrants on their landing at Point Levi.

I must not forget to state that I was much pleased with your roads being made straight, running east and west, also north and south; and also the large and well-cleared farms, although I missed the hedge-row fences, &c.

The younger sons of English nobility, who do not see a chance of ever coming into possession of the family landed estates, are taking up large tracts of land in Australia, New Zealand and Africa: why do not your emigration agents induce them to come out here? I ask the reason, and will answer it. Because they are not doing their duty. Your emigration agents should not be of Canada, but men who are well known in the Old Country, and have seen Canada; whose word will be taken, and are personally or reputedly known to them.

Old Country manufacturers would also come out and erect factories did they but know of the resources of Canada, and would not require a bonus before starting to manufacture.

There are in Canada many suitable men, who, if they were in the Old Country, could induce as many farmers, and farmers' sons, and farm laborers

to come out as your present emigration agents could unsuitable emigrants.

I remain yours, &c.,  
CHESHIRE CHEESE.

Stratford, April 7th, 1877.

P.S.—I had three cousins, young farmers, in Cheshire; two of them waited eight years for a farm on the estate, the eldest waited until the death of his father and succeeded him; the second eldest, later, after a few years' waiting, secured a farm on the estate; the third is still waiting for a vacant farm on the same estate; they were all three possessed of means, and could have come over and bought and stocked a farm without troubling anyone; had they at the time known of the agricultural position of Canada, that I do now, they would have come out here, and have shown some good, practical farming. Farm tenants have so much to put up with from their aristocratic landlords in the Old Country, they are only too glad to leave them and be landlords themselves, but they lack the information of Canada more especially than other colonies. C. C.

## Free Trade vs. Protection.

SIR,—In "Reformer's" letter, published in the February number of the FARMER'S ADVOCATE, he asks the question as to why Canada does not adopt Protection! And as the same question is often asked here, it is perhaps as well to remind him that each and every province of the Dominion has different views as to that subject. Our legislators, before committing themselves to a strictly protective policy, should take into careful consideration the various wants and feelings of the whole people.

We have, in a country as large as Canada, conditions so opposite to each other that it is almost impossible to frame a tariff suitable to all, so that any kind of legislation which would perhaps benefit one would injure another. There is always a class of farmers and manufacturers who will raise the cry of Protection, but they are those who fear competition, and therefore should not be encouraged. Look at the example of Great Britain, for instance. There was very little improvement in agriculture from the time of the Saxons until the repeal of the Corn Laws. That brought the British farmer into competition with the whole world, and has produced a class of agriculturists second to none, and very far in advance of the surrounding countries.

There is no doubt that a protective policy would be the means of keeping a few Yankee goods out of the Ontario market, but would it do the country any good? I am inclined to think not.

From the reports of the Centennial Exhibition it is shown that Canadian manufactures compare very favorably with those of the United States. If any Canadian farmer is so foolish as to prefer an inferior article simply because it is imported, I should say let him take it. Many manufactures are the product of certain parts of the country, and cannot at present be obtained by other parts without a greater cost than can be afforded by the people. For instance, we cannot get our agricultural implements from the East on account of having no means of inter-communication, although every one knows that he is buying an inferior article. It would be hardly fair to ask us to pay a higher price for a foreign article we cannot help buying, although we know there are better articles made under the same flag, if not in the same country.

Now, the main question here is—the farmers want a higher protective duty on produce because they say that it will not pay to produce grain, &c., without it. We have not enough land in cultivation in the lower country to grow flour for the people, if it was all in wheat. There are a few farmers who could grow wheat to sell, but these people are comparatively well off, and could live without growing a grain. On the other hand, there is a large number of settlers who have to buy nearly all the food they consume for the first two or three years. A man going into the bush to chop out a farm, has to have the heart of a lion any way, so he ought to be encouraged, not handicapped with taxes. They have a tax of \$2.50 a ton on imported coal on the other side, when they have no coal of their own that is any good. The consequence of this tax is that their manufacturers have great trouble to compete with eastern manufacturers who have no duty to pay on their coal and cheaper labor.

Let the manufacturers and farmers of Ontario strive to compete with the Yankees, and I see no cause why they should not be able to do so in

future as in times past. Protection is a rotten stick to depend upon.

VERITAS.

Maple Ridge, Frazer River, British Columbia.

P. S.—I said there was not much land occupied by speculators in my second letter, while my first seemed to give the idea that there was. The reason of this is that there is so little of the country opened up that it is quite a job to find a suitable Government lot when one first comes into the country, although there are plenty. Going through the bush to find a lot is all but an impossibility to a stranger.

[We have inserted communications from our subscribers holding different views. We are pleased to have correspondence from all our Provinces.—Ed.]

SIR,—I have often thought that farmers should speak up and let their ideas be known, as we generally read your paper from beginning to end.

I am one that would second the resolution passed by the South Essex Agricultural Association. Why should we favor the United States, as is done by admitting their products and manufactures at so low a duty, and in many instances free, when they levy such on our commodities brought into their country as in many cases to prevent our exporting anything to their markets. What we want is a Farmers' Association like the merchants' Board of Trade, to speak out in our behalf. I would not do without the FARMER'S ADVOCATE. R. G., Glenvale.

## Cob Nuts.

SIR,—In this month's issue of your valuable Journal I noticed an enquiry respecting the growth of cob nuts in Canada, I am sorry to add that I cannot answer the same.

Having seen the cob nut grown in the county of Kent, England, and having eaten largely of them for dessert when I travelled that country for years, I shall be glad to see some communication from some grower in Canada in your next issue.

COMMERCIAL TRAVELLER.

Toronto, April 6, 1877.

## British Columbia Correspondence.

The plowing is over in many parts of the country, and all crops should be put in as soon as possible. Many of our farmers do not plow half enough. Our ground is covered with cradle knoles, and therefore should be plowed as soon as it is possible to do so. The grass lands become covered with moss and briars if not broken up. Besides, it is impossible to get the grass cut properly if the ground is full of hills and hollows. Timothy is certainly not a good kind of grass to grow on light soil year after year, yet I have seen people grow it for hay and feed it down afterwards until it was not worth cutting. The farmers should remember, that as the land costs about \$50 an acre to clear and fence, they cannot get back the interest of their money if they only get from  $\frac{1}{3}$  to  $\frac{1}{4}$  of a ton of hay to the acre. If they had the money it cost to clear this land in the bank, and it paid no interest, they would grumble soon enough. I am sure we shall have a better system of farming when it becomes a little harder to get a living. We want a good, strong kind of Canadian plow here; I have not heard of any being for sale in this country; the kind mostly in use is the Boston Clipper, or some such kind of Yankee arrangement; the price is about \$30. Some of your manufacturers should establish an agency for the sale of a good kind. Every farmer cannot send to Ontario for a single plow. The best plan would be to stamp the price on them, including a reasonable profit, as well as the cost of carriage, for if they did not do this our storekeepers would spoil the sale by trying to make too much out of them.

The people are coming in fast, in fact, quite fast enough. If there were a large influx of people now, there might not be work enough for them all, unless the railway or some such large public work was in course of construction. I have not heard of anyone complaining about wanting work yet. Although living is cheap, tools and clothing are not, so that it will be necessary for those who have not means to get employment of some kind. Three years is the time it will take before a settler will be able to keep himself and family off a lot of land, and he will do well if he can do it at the end of that time. I don't mean to say that he

will get  
he cannot  
and will  
is great  
where it  
Railway  
Burrard  
timber.  
valuable  
terminus  
the upper  
ing, sto  
much la  
would r  
except  
same, th

Maple

SIR,—  
Norwic  
purpos  
ville, o

[Ma  
—Ed.]

Agric

We  
of the  
Intern  
Bulle  
the gr  
Park,  
follow  
ducts,  
paratu  
Agric  
tion o  
of the  
Belmo  
imity  
weste  
ready  
mach  
finest  
alrea  
will b  
and T  
their  
very  
the c  
high

The  
Bure  
fectly  
were  
very  
Gene  
as th

Sr  
you  
Inter  
tenu  
tors.  
Y  
port  
of th  
the  
beau  
latel  
Cent  
A  
very  
whi  
P  
the  
char  
W  
play  
the  
adv  
mer  
to i  
nat

Sup

I  
cul  
jou



will get nothing until the end of three years, but he cannot expect to be fully able to do so before, and will therefore have to work out some. There is great excitement about land at Burrard's Inlet, where it is supposed the terminus of the Pacific Railway will be. What land I have seen around Burrard's Inlet is very rocky and covered with big timber. I do not suppose it will become very valuable for agricultural purposes, even if the terminus is made there. The railway will bring the upper country into the market, and there farming, stock-raising, &c., can be carried on on a much larger scale than here. If the Government would not allow anyone to acquire a title to lands except upon a genuine *bona fide* settlement of the same, they would do a great service to the country.

Maple Ridge, Frazer River, B. C., April 1, 1877.

**Union Exhibition.**

SIR,—The South Riding of Oxford and the South Norfolk Agricultural Societies have united for the purpose of holding a Union Exhibition at Otterville, on the 5th and 6th October next.

R. I. W., Sec., Tilsonburg.

[Many more localities would benefit by uniting.—Ed.]

**Agricultural Department Permanent International Exhibition.**

We are indebted to Mr. C. Henry Roney, Chief of the Agricultural Department of the Permanent International Exhibition, for a copy of the official Bulletin of the Exhibition. About one-sixth of the ground floor of the Main Building, Fairmount Park, will be devoted to agriculture, under the three following heads: Agricultural and Animal Products, Land and Marine animal culture and apparatus for some living and preserved specimens, Agricultural Implements and processes. The location of the department in the northwestern portion of the building, fronting on the park, and on Belmont avenue, is the best possible, and its proximity to the Machinery Department in the southwestern portion of the building permits of the ready transmission of power to the agricultural machines to be exhibited in motion. Many of the finest displays in the Agricultural Building have already been transferred to the Main Building, and will be arranged in this section, and several States and Territories are providing collective exhibits of their wealth in agriculture and forestry. Some very interesting foreign displays will be made, and the entire exhibition promises to be one of the highest character.

The experience, as secretary of the Centennial Bureau of Agriculture, has made Mr. Roney perfectly at home in his new office. That his duties were performed in an efficient manner has been very handsomely acknowledged by the Director General, and we may safely accept his past services as the earnest of the future.

SIR,—I have the pleasure to-day of forwarding you an advance copy of pamphlet No. 1 of the International Exhibition Co., Main Building, Centennial Grounds, intended for our foreign exhibitors.

You will find on perusal that the north-west portion of the building, embracing about one-sixth of the entire area has been devoted to Agriculture, the displays in which will be very interesting and beautiful, comprising most of the finest exhibits lately displayed in the Agricultural Hall of the U. S. Centennial Exhibition.

A number of States and Territories are making very handsome collective agricultural exhibits, which promise to be very attractive.

Power will be transmitted, by wire rope, from the south side of the building, to drive such agricultural machinery as may require it, free of charge.

We are desirous of increasing our foreign displays, and shall esteem it a favor if assisted through the columns of your largely circulated and valuable journal, and trust that the courtesies and advice so kindly given to the Agricultural Department of the Centennial Exhibition may be tendered to its successor, the same department of the International Exhibition Co. Yours respectfully,

C. HENRY RONEY,  
Superintendent Agricultural Department, and late Secretary of Advisory Committee, Bureau of Agriculture, U. S. C. C.

P. S.—A space has been set apart in the agricultural section for the display of agricultural journals, which may be sent us, with desks for

the use of correspondents, which, we trust, will be well patronized, and where every facility will be afforded. In cases where the Exhibition is noticed, an additional copy of the article will be desirable for permanent preservation in my scrap book. R.

Ontario Bureau of Agriculture and Arts.  
SIR,—Captain W. R. Brown, R. N., of England, in a letter to the Hon. the Commissioner of Agriculture, states that in Malta, where he resided for several years, the practice to prevent insect injury to the fig is by suspending at an early period of the spring a few dried figs on some of the branches of the trees, without which it is believed that the produce fails.

It is suggested, analogically, that some slices of the raw potato put on sticks or otherwise in several parts of the ground where potatoes are cultivated, and some similar slices strowed on the surface, might attract and retain the beetle, in preference to its attacking the vital parts of the plant itself.

As the pest in all probability may reappear this season in some sections of the Province, it is much to be desired that the suggestion should be fairly put to the test of experiment by some of your numerous readers. GEO. BUCKLAND,  
Toronto, April 18, 1877.

[We thank Mr. B. for the useful hint. It may be a very good plan to feed some kinds of insects, but the only food that we think of use for the potato beetle is paris green, or poison in some form. The rapid increase of this pest is such, that though feeding them might perhaps protect the potato plant when it first comes through the ground, the second family of bugs might destroy the crop.—Ed.]

**Plaster of Paris or Gypsum.**

Several queries have appeared in the ADVOCATE respecting the use of plaster, but I would recommend farmers to try it on a small scale at first. I have tried it sown broadcast on barley, after it was over ground and before it was rolled, without any perceptible benefit, on a clay loam. Perhaps, as the land had not been many years cleared, there was still a sufficiency of potash in the soil to render plaster unnecessary. On another occasion I tried it mixed with unleached ashes, at the rate of a bushel of each per acre, on part of a field, immediately after a crop of hay, principally clover, had been removed. The season proved very showery, and we had some trouble in saving our hay that summer, and this was probably the reason why the plaster and ashes had no perceptible benefit. The plaster grass came on equally fast everywhere, but as I do not approve of taking two crops of hay from the land in one year (unless where the field could be heavily top-dressed after the removal of the second crop), I turned the cattle on it later in the season, after the clover was in blossom, so that any ripe seed might be trampled out, and whatever stubble might remain would protect the roots of the clover from the frost; and as the herbage would decay under the snow, it would form plant food for the next year's crop.

Neither lime nor plaster should be used for a crop of peas, as they would probably run too much to straw; besides, the peas would not boil soft, unless a little baking soda were added to the water in which they were boiled. Many years ago a neighbor of mine in the Province of Quebec had some worn-out meadow land which one year gave him only three loads of hay. As he could not afford to brick it up, he procured some plaster and sowed a bushel of plaster and a bushel of ashes per acre in the spring, and that season cut seven good loads of hay from the same ground. On light soils I have no doubt it would answer well. It does not follow that, because plaster did not prove beneficial on my land when I used it, that it may not be useful a few years hence when the potash in the soil shall have become exhausted.

SARAWAK.

**On Mangolds.**

SIR,—As the season is again at hand when farmers will have to decide what crops they will have to sow for next year's feeding, I will give a few ideas on mangolds. I do not think they will grow a heavier crop than the Swede turnip on the same land, but they will do much better on very rich land, such as yards where cattle or sheep have been confined, or where the soakage of the barn-yard has run over the land. There is no kind of root surpasses the mangold for such places; but ordinary farm land must be heavily manured to produce a crop of 600 or 800 bushels per acre. While

speaking of the kind of land most suitable, I would mention a trial I made of swamp muck, three years ago, that might be useful to some of your readers. There was about two acres of what had been willow marsh, and the soil was light and porous, yet apparently rich. I intended to sow it all with mangold, but run out of seed, and sowed about half an acre with white carrot. The mangold was a failure, not many coming up, and those that did come not rooting well. The carrot did very well, producing quite a heavy crop. This convinced me that swamp muck, if of a light, porous nature, is not the thing for mangolds.

Another objection to them is that they are easily frozen in the fall. They must be taken up early, or a hard frost such as came about the 10th of last October, would ruin them. For feeding, they are valuable at any time after they are pulled till the next spring, if they are well kept. My practice is to feed through the fall and winter to cows giving milk. They are very much superior to turnips for this purpose, as they give no bad flavor to the milk. They are also better for feeding hogs in winter; but if fed either, the hogs should be kept warm.

The fact that farmers, after growing both turnips and mangolds for many years in this part of the country, grow perhaps twenty acres of turnips for one of mangolds, proves that the turnip is thought the most profitable as a field crop.

I sow them by making drills, as for turnips; then make a rut in the top of the drill with the end of a stick. Sow by hand about 3 or 4 lbs. per acre; tramp the seed with the feet by walking heel to toe; then cover with the back of a rake, 1 to 1½ inches deep. F. M., Innerkip.

**About Growing Orchard Grass.**

Having had the experience of several years past in sowing and growing orchard grass, seeding at different times of the year, with different mixtures, and finding it a valuable grass for the farmer or dairyman, I feel interested in the question of your enquirer, Mr. McLeod, about sowing it. Although what he asked you have well answered, still I would say to him that I have found other ways of seeding and managing to succeed much better.

It is not practical to sow the white clover with it, for the orchard grass is so strong and rank a grower that it would not be suitable for the lawn; it would so over-run the clover that the latter would entirely disappear after the first year, and it will even run out the red clover in about that time, though it is very suitable to seed with it, because it will fill and occupy the ground the first year, while the orchard grass is thickening up and stooling (which is its manner of growth); but after that, if it is well seeded, it will so occupy the ground as to run out everything else, and be a permanent grass, as far as my experience goes.

I have several times sowed it with grain crops in the spring, but obtained only a light seeding of it. The best way I have found is to manure and till the spring and plant it with early potatoes; work them very thoroughly and dig early, then cultivate and dress down to a good seed-bed, and sow it with orchard grass alone (that is, without grain) about the middle of August, some twenty pounds, as you said, to the acre; and I have sowed at the same time red clover seed, which grew and answered well for the next year, after which it ran out.

The most profitable way of using the crop is to mow the first growth for hay, and especially for soiling purposes, as it comes earlier than any other green crop, but for the rest of the season it does not stalk up again, and if mowed, gives two or three more crops of grass like rowen hay. I would, however, prefer to pasture it after the first mowing, as it grows up very quick and stands the drouth well, giving quite an abundance of good feed.

H. IVES, Batavia, N. Y.

[We thank our American subscriber for the above useful information.—Ed.]

RINGBONE IN HORSES.—I was surprised to see in a late number of the ADVOCATE over the signature of "J. M.," a communication finding fault with "V. S." for his mode of treating ringbone, saying that he cannot cure one out of twenty by firing or blistering. Now I beg to contradict him, and to state that I can remove 99 out of 100 by a sweating blistering where "J. M." cannot cure 1 out of 100 with his knife. I have seen the muscle removed that "J. M." speaks of, but never saw one completely cured. F. R. Ellice.



**Ants and Strawberries.**

SIR,—I have a garden of a sandy soil, and have tried for the last two or three years to raise strawberries, but have been continually defeated by small ants that burrow under the plants, undermining them. I have tried everything that I can think of to exterminate them, but without success. Could you, or any of your subscribers, assist me by informing me of something that will kill the animals?

FARMER, Colchester.

[We have heard of their having been driven from localities by placing pieces of onions in and about their haunts. Perhaps some of our readers will reply more fully. Exposing their nests to a frost is very effective.—Ed.]

SIR,—I want to make a lawn in front of my house, which is situated on the top of a sandy hill. I do not know what to put with the soil to prevent it being burned up in the summer. I am afraid if I use swamp muck that it will be reduced to powder by the sun. Can you advise me in your next issue? I forgot to say that the lawn has to be made on a slope. A SUBSCRIBER, Lakefield.

[Add as much clay as possible. A substitute would be best. A good dressing of salt on the land before seeding would be found beneficial. Well-rotted manure and gypsum would make a good top-dressing. Superphosphate would also improve it.—Ed.]

**Mules.**

In reply to A. W. C., in last issue, G. Lucas, of Sarnia P. O., says he breeds mules and has three good span for sale at the present time. W. Harris, Mount Elgin P. O., says he has one span for sale. H. B. Burch, of Lambeth P. O., says he has a pair, well broken, that will weigh 2,000 pounds. A. W. C. can write to the parties for particulars.

**Superphosphate.**

In your March No. I noticed a letter from a Mr. Albert Abbott on "Superphosphate" and his visit to the Brockville Chemical Works. I used a small quantity of the XXX brand from the above Works last year on my turnips, and found it a great success. I would like to know which brand is best for roots, and which for grain, and how the two brands are used in Canada. I have a quantity on hand, and would like to know how to apply to the best advantage, and give it a thorough trial this spring. SUBSCRIBER.

P.S.—I am well satisfied with your paper, and I find it gives general satisfaction to those that take it in this island.

[For roots, use ammoniated XX, sowed in drills, being first mixed with double its weight of dry earth, and so scattered as not to injure the seed. For lands that need potash, which are to be sown with grain, use XXX. If satisfied that lands don't need potash, for grain, use XX. In each case, sow 500 lbs. to the acre.—Ed.]

**Scab in Sheep.**

Can you or any of your readers let me know a cure for scab in sheep, and insert it in your next number?

[We extract the following from the transactions of the Highland Agricultural Society of Scotland:

It is clearly ascertained by scientific men that the scab in sheep, like the itch in the human being, is connected with and propagated by certain minute insects belonging to the class of acari, which inhabit pimples or pustules. But the question naturally arises, how came it first into existence? This problem is very difficult of solution, and puzzles the most eminent physiologists. But, as I have already said, I have never known it to break out spontaneously among a flock of sheep, properly managed, during thirty years' experience as a shepherd in pastoral districts. Various and conflicting opinions exist as to what extent the disease is infectious. Some affirm that it requires sheep to come in contact with the disease before it can be communicated, while others maintain that the disease is propagated by the mere traveling on the road, such as a public drove road, from large markets or fairs. I, however, do not think the disease is so catching as the latter advocates affirm. For example, I acted as shepherd for sixteen years, on various farms, where the drove road from Falkirk to the south passes through the sheep pasture, and every year some of the lots of sheep were more or

less affected with scab, and during all that period not a single sheep of which I had charge caught the disease.

The cure of scab lies in the destruction of the insect, but the important question is, what is the best composition or infusion for that purpose? The remedies that are commonly applied are numerous, but the most effectual, with the least danger of injuring the animal, that I have ever seen applied, is the common spirits of tar; and, if properly applied, it will penetrate and destroy the insect concealed in the pustules, or buried beneath the skin. The quantity applied may vary according to the condition and age of the sheep, but for hill, or ordinary breeding stock, one bottle of spirits of tar, mixed with twelve times the quantity of water, is sufficient for twelve sheep; or one common wine-glass of the spirits of tar, mixed with twelve times the amount of water, is sufficient for one. If mixing for an hundred, six gallons of water with six pounds of common soda ought to be warmed to the boiling pitch, then add the spirits of tar.]

**Sowing Grass Seed.**

I have lost so much money by sowing timothy in the spring, that I do not intend to try it again. Clover seed may be sown in the spring, and harrowed in with the grain, as it will bear being covered deeper than timothy. I have found it the best way to sow timothy on the stubble directly after harvest; if the ground is not too hard, it might be harrowed first, but that is not absolutely necessary. If there should be a shower or two it will soon be up, and if the ground does not lie wet, and the snow lies well during the winter, the timothy will likely give a good crop the next season; add to which, the seed is generally cheaper in September than in April, there not being so much demand for it. I have noticed very fine timothy growing on back roads, where hay had been taken into the lumber swamps during the winter, and the seed was shaken out on the snow. The trees, which were cut out only a sufficient width to admit of the sleighs passing, would shade the road in the summer, and in that part of the country, that pest of the good farmer and the delight of the scallawag farmer—the highway cow—was unknown. SARAWAK.

**Ripe Cheese.**

SIR,—I was taking supper the other evening with a friend, another reader of the ADVOCATE. As we had cheese on the table, the conversation turned on the proper quality of a ripe cheese. We differed in opinion, and agreed to refer the question to you, namely, What is the proper consistency of ripe cheese? We should be pleased to have your reply in next ADVOCATE. R. A., Brucefield.

We quote the following:—

Professor Arnold gives the following characteristics of properly ripened cheese:—"Well, ripened cheese has no elasticity when pressed with the finger; it feels as if breaking under the pressure, and the dent remains; it has a salvy, oily appearance, when worked between the thumb and finger, and melts on the tongue like a ripe pear; the cut surface remains oily for a long time, not readily drying up; unripe cheese, on the contrary, is elastic when pressed, hard or tough when worked between the thumb and finger; soon dries and cracks when exposed to the air; when tasted by the tongue, is deficient and fat, and does not dissolve readily."

Mr. Arnold's work, entitled "American Dairying," contains so much useful and practical matter that every dairyman should have it. We safely and highly recommend it to you. It is worth double its cost to any dairyman, regardless of all the knowledge he may think he has.

**Abolition of Spring Shows.**

You are asking your readers to contribute. I like to read the communications from others that I see in your paper, and would like to help you, but I never have written for any paper before. If this is not worth printing you can destroy it.

I think the spring shows of entire horses and bulls should be abolished. There is a larger percentage of deaths of this most valuable class of stock than of our common stock; this I attribute in a great measure to the practice of preparing them for the spring show. I think the fall shows are the proper and only time they should be put in show condition.

Mr. Thomas Bell exhibited his imported draught stallion at Clinton. He was taken sick at the Exhibition, and died in a few days. This fine animal was only imported last year. He took the first prize at the Provincial Exhibition at Hamilton.

H. S. Clinton.

[This is a debatable question. It has been our opinion that the fall exhibitions of stallions are far more injurious to them than the spring exhibitions.—Ed.]

SIR,—I have seen in your paper that you lost a subscriber by inserting a letter, condemning the Red Chaff or Farrow wheat. Your condemning it was none too soon. The price of good housekeepers' flour, spring and fall mixed, is now \$4.25 per 100 lbs. here, while flour from Red Chaff wheat can be bought for \$3.50. This shows the opinion of the purchasers of flour on the value of the wheat. A READER.

London, April 23rd, 1877.

**Canadian Agricultural Notes.****Prince Edward Island.**

You noticed some time ago the number of "diggers" at work on the "mussel-mud beds" over here; perhaps an extended description of the deposit, its use and manner of raising, would be acceptable.

These mussel-mud beds, so-called, consist more properly of wide and deep deposits of countless oyster shells, and are found on all the shores and in the beds of all the rivers of this island, sometimes covering nearly the whole bed of the river, and in others and on the coast, found in "beds" of from one-eighth of an acre to twelve acres, and from one to thirty feet deep.

They are deepening but slowly, if any, and do not differ much in quality, with this exception, that the shore "beds" are more exposed to a deposit of from one to three feet of "tidewash" of sand from heavy winds than the river beds, which are sometimes found perfectly clear, and, at low tide, both are generally found bare or with a very light draught of water.

The beds are free to all, and are prized very highly, the season for raising commencing the 1st of March and ceasing when the ice will no longer hold the workers. The mud is hauled as far as fifteen miles in some instances, generally in loads of 1,500 pounds each, about twenty-five of which loads are spread to the acre.

It is about 40 years since its use was first adopted, but it was in a desultory way until five years since its merits became more generally, or more favorably, known, and to-day there are probably upwards of one hundred "diggers" at work here on our different bays and rivers, working eight hours a day, raising every minute a fork-full weighing 250 pounds, for thirty-five days. Any of your readers in a moment can see the vast quantity used.

Live oysters are raked from some of the "beds," and who can think without dropping a pearly tear in memory of the billions of delicious bivalves born to live and die upon their beds of ease, ignorant alike of the honored pains of their descendants and the unsatiable appetite of that unscrupulous mortal, the American of the nineteenth century, leering at their unceasing home across Northumberland Straits.

**ITS USE.**

The mud consists of, and consequently acts like, lime, and is put on ploughed land in the proportion mentioned, well scattered over and harrowed in. The land is stimulated and will not bear such heavy cropping as under other fertilizers; traces of it are found after a lapse of ten, twenty and thirty years, but it is usually applied about once in fifteen years. Tourists driving through the island will have noticed the peculiar dark, vivid green it imparts to grass fields; taller growth and heavier, in brilliant contrast to adjoining fields, under different treatment.

**RAISING OR DIGGING.**

A man and two boys repair to the scene with a horse and two box sleds loaded with an ice saw, a Y-shaped machine, to the cross-arm of which is attached an "upright" supporting a "crane," and to the tall end a "windlass," holding 75 feet of  $\frac{1}{2}$  in. chain and the "fork." They cut a hole in the ice 30 feet long and 3 feet wide, and place the crocheted arms of the Y close enough to one end to allow the chain (which runs from the windlass down the main stick up the upright and through the crane) to be



fastened to the "fork," and all is ready for work. First, we will describe more fully the implements. The long piece or tail of the Y is of wood, 12 feet long and eight inches square, the arms each 8 feet, same square, with a cross piece supporting an upright 9 feet high, and a "crane," all of same size, hardwood timber. The "fork" is like an enormous sugar scoop (made of 1 1/2 in. square iron, teeth 30 inches long, 7 or more in number) mounted on a handle 27 feet long, 8 inches diameter. Now imagine this "fork" suspended in the air under the "crane," close to the end of the hole near the windlass, a man grasping the handle by a "cross-arm" at the opposite end.

The man sings out "ungear," the boy who has put the horse in the shafts on the windlass raises a cog, the chain "pays out," the fork descends in the water, the man walking backward, dragging it about fifteen feet, until it reaches bottom; then singing out "hoist away," keeping the handle slightly elevated (with the boy's assistance perhaps), the fork is drawn forward and then upward and high enough out of the water to allow its contents to be turned (by a dexterous twist) into the sled in waiting alongside, and so on until the sled is filled. Another horse now comes on the scene, takes away the sled (which holds about 12 of these scoops), and leaves another in its place; and they work thus from 7 a. m. to 6 p. m., from 20 to 30 loads of 1,500 pounds each being considered good work, with about six feet advance on the "bed," as, of course, when they have gone to the bottom of it, they lengthen truck, move the apparatus, and work on.

These "diggers" are now being superseded by "patent vertical-acting self-lockers," costing twice as much (\$70), run by the same power, but rising over double the quantity.

**The Northwest.**

The *Free Grant Gazette* speaks in high terms of the Turtle Lake Settlement, which comprises a portion of the northern part of Humphrey and the southern part of Christie. "The first settler, Mr. Alexander Ross, from Glengary, moved in about seven years ago. Since then, there has been a considerable influx of settlers. The quality of the land is among the best in the Free Grant Districts, and the settlers, like the land, are also among the best in the Districts. Large and valuable clearances have been made, fair crops raised, and comfortable buildings are going up. The settlers have given the country a thorough trial, and are highly pleased with their prospects—certainly an encouraging and satisfactory state of matters. This class of settlers deserve success, and the respect and sympathy they have won from all who knew them either personally or by repute."

The first fact I shall state is, that the fertility of the land is beyond doubt. Nowhere in Ontario do I know of any quantity of land that will even bear a comparison.

Perhaps America does not contain land of greater fertility; for miles and miles, in fact from the 40th parallel of latitude to Lakes Winnipeg and Manitoba, west of the Red River, extends almost without interruption one grand, unbroken prairie, unbroken, save at long intervals, by the dry bed of some old-time stream, or the tortuous course of some small meandering creek, red-named river.

Along the banks of the Red and Assiniboine Rivers, and along the creeks, are fringes of wood, consisting chiefly of aspen, poplar, oak, elm, ash and birch. The prairies sometimes extend for miles without a single tree or bush to relieve their monotony; but in other places, where the prairie fires have now swept for three or four years, groves of young aspen cover the land. Especially is this the case between Assiniboine and La Riviere Sale. Here prairie fires are not so frequent; protected from fires on the north and south, and almost insulated by the river windings, the prairie is almost a succession of groves. The whole of this country is covered by a deposit of rich, black, alluvial mould, varying in depth from a few inches to many feet. Geologists tell us that at a very recent period, recent at least in the annals of geology, the whole country described was submerged beneath the waters of vast lakes, which have continued age after age to subside, until at length they have contracted to their present bounds. And still the change goes on, decade after decade, the black mould is being deposited over the shallow bottoms of the lakes north of us; and it may be, that before many generations, the prairie grass shall wave where to-day water-weeds grow, beneath the waters of Manitoba, and fatted kine shall low where the swift pike darts upon its prey and shoals of whitefish feed.

All over these prairies, at intervals, are shallow marshes, sometimes extending over thousands of acres. Some of them are flooded in the spring, and dry at midsummer. These form the far-famed hay lands of Manitoba. Here has been hitherto no waiting for a calm day to sow the grass seed, no anxious expectation of rain to make it take root, of snow to shield it from the winter's frost. Nature has herself sown the seed, and without aid from art, brought it to maturity. When the time comes, man takes his scythe or his mower, and lo! the tall grass is ready for his hand.

Along the Red River the mould is heavier and richer than it is further west, where it has in most places a greater proportion of sand.

And yet I know not whether I do not prefer the land in the neighborhood of the Portage to that bordering on the Red River. It is easier worked, dries sooner in spring, is less liable to damage from summer frosts, and is rich enough for all practical purposes. Looking out of my office window, I see a field of magnificent looking grain. That field is owned by one of the most shiftless half-breeds in the country; for twenty years he has taken crop after crop from it, and never a single cart-load of manure has it had during that time, yet this year's crop will equal that of a well-tilled field in Ontario. Surely this land is rich enough!

Barnyard manure is valuable in Ontario; here the natives have been accustomed to let it accumulate around the stables (barns they have none), until it encompassed them with a vast mound, preventing ingress and egress. And what did they do? They abandoned the old and put up a new stable.

They seem to know of no better use for manure than to throw it into the rivers, and Parliament has been obliged to pass an Act to prevent them doing so.

All sorts of root crops seem to me to grow and yield better than they do in Ontario, and the quality is fully equal if not superior.

The yield of wheat, oats and barley is much greater, the quality of the grain is equally good, and the labor of the farm is not at all as great as in Ontario. For the last ten years men have lived and even made money by farming in Manitoba, who in any other country could not have made a living by it. In many parts the farmer could run a furrow ten miles and not strike a stone or a root. Wheat is now worth \$1.50 per bushel at the Portage, and for the last ten years the average price has been about one dollar.

With wheat at this price, a farmer could in a few years make a fortune. Of course the price must fall, and a bushel of grain or a barrel of flour will be worth as much less at Portage La Prairie than at Toronto as it will cost to freight the bushel of grain or barrel of flour from Portage La Prairie to Toronto. But the farmer can grow wheat and make money in Manitoba when the price of grain shall have fallen very materially.—*Correspondence of the Toronto Mail.*

**British Columbia.**

Notwithstanding the isolation of this Province, and the disadvantage under which it labors from the heavy expenses incurred in reaching it, a small but steady stream of immigration is gradually moving thither, comprised chiefly of persons looking for available land for agricultural settlement. Those parties almost invariably choose the Government grants, and they express themselves well satisfied with the country, and have little difficulty in finding suitable locations. It would be very singular, indeed, if it were not so, as the extent of land, capable of easy and successful cultivation, is more extensive and varied in its character than even the oldest inhabitant had any conception of, and it is usually from parties hunting after land that the undeveloped agricultural resources of the Province have been prominently brought out. The New Westminster district is that which commands the greatest favor from its proximity to the seaboard, the large breadths of land inviting settlement, and its acknowledged fertility; there are also portions on the Island, smaller in extent, which are equally rich, and easily accessible to good markets. Of the richness of the soil too glowing a picture cannot be drawn. As a stock-raising country it is impossible to surpass it, from its succulent natural grasses, the geniality of the climate, abundance of excellent springs and streams of water, and productiveness of root crops. Forty tons of turnips and thirty tons of carrots are considered fair average crops per acre, and these yields could easily be increased by a reduction in the price of

labor and the introduction of improved agricultural machinery. In the neighborhood of Langley, a Swedish turnip was grown last fall which weighed 51 1/2 pounds a considerable time after it was taken out of the ground, and half a dozen on an adjoining farm, from a single row, average 25 pounds each. Timothy hay produces three tons, and wild two to two and a half tons per acre. Wheat, oats and barley have also been raised successfully; but, on account of the sparse settlement, the quantities grown have been too unimportant to give a reliable estimate of the average crop. The prices realized by farmers at present are two cents for wheat, oats and potatoes, five cents for beef, ten cents for dressed hogs, 35 cents for butter, and 20 cents for cheese, per pound, and \$18 to \$20 per ton for hay.

Referring to the climate, the winter that is now passing is the mildest that has been experienced for many years; the thermometer has not fallen below 20° above zero, and for the past week it has ranged from 49° to 55°; more lovely and enervating weather than we are now enjoying cannot be equalled on the American continent during the winter season. The mornings are cool, clear and frosty, with a bright warm sunshine during the day; such weather as the people in Canada would be glad to experience in May. The country generally is as far advanced in growth as it usually is in Eastern Canada during that month. Roses were in bloom at Christmas. Pansies have appeared creeping out from a slight covering of snow, and snowdrops, wall flowers and polyanthus are blossoming in several gardens. When such thrilling accounts are received of the severity of the winter on the Atlantic side of the Rocky Mountains, it seems passing strange that the superiority of the Pacific Coast for the geniality of its climate, both winter and summer, is not more practically appreciated.

**Out-of-the-Way Parts of New Brunswick.**

A traveler has been exploring the out-of-the-way parts, and from his letter to the *Telegraph* we learn a little of the agricultural resources of places in New Brunswick, little known even in that province. One of the most out-of-the-way of N. B. is perhaps the eastern end of St. John county. A dense forest of spruce, birch, beech and maple, on the high, even, table-land, five or six hundred feet above the level of the Bay of Fundy, furrowed by the streams discharging into the Bay, it presents a peculiar appearance. The rocks on the seashore are said to be stored with hidden treasures, copper and other ores. Gypsum and freestone have been found, and even coal crops out in some instances. The great staple of this section of the county, however, has been the lumber. The land has only been valued for the quantity and quality of spruce trees it contained; and where they are grown, the lumberer despises that which, with proper treatment, would become his greatest source of wealth, for the soil is of excellent quality, and with the exception of the rocks and gullies on the shore, is even and easily worked. Its productive qualities have been fully tested, and the yield in potatoes and grain has been very abundant; this, too, without the aid of manure. Knowing the richness of the soil and its convenience to a good market, several persons residing thereabouts applied to the Government for a tract of land whereon to settle, near Martinshead, and the Government ordered a track of 3,000 acres to be laid off for settlement under the Free Grants Act, and the order has been executed. Roads will now be opened up as soon as the settlers have complied with the conditions of the Act; and the pathless forest of today will in all likelihood by a hive of industry a few years hence. It will be known as the Wolf-Brook Settlement.

**Quebec.**

At Melbourne, Que., the Melbourne Slate Quarry, property of Mr. Benjamin Walton, has lately been supplied with steam power and derricks, and the work is pushed with great energy. No expense is spared to develop the quarry, so that a large number of slate-makers may be employed and a large amount of slate produced. A shaft of about fifty feet in depth was sunk in the bottom this winter, which is being opened out. The slate from this depth is much improved in texture and solidity, which, for beauty and uniformity of color, cannot be excelled, thus affording the public an article of domestic manufacture superior in all respects to the slate imported from the United States.



## Agriculture.

## Liquid Manure.

Manure in a liquid state is the most beneficial manner of applying it, when immediate results are required. Containing as it does the fertilizing principles in a liquid condition, it is more readily absorbed by the feeding roots of the plants. It can also be applied at all stages of the plant's growth, which often cannot be done with solid manure; and some plants, which are not in a condition for being much stimulated in the earlier stages of their growth, can more readily receive it at the time they do need it when in a liquid form. For instance, peach trees grown in pots or beds under glass, if heavily manured with ammoniacal fertilizers before or at the time they are started into growth, are apt to drop their fruit when stoning—the most critical period of their growth—but if applied after this stage, it is of the greatest benefit to them, increasing the size of the fruit.

Farmers who allow the liquid part of their manure to go to waste, lose the most beneficial part of it, as ammonia is produced in the greatest abundance in the liquid part. The urine of cows, horses and swine, together with the drainings of their droppings, if allowed to run into a tank, then pumped on the manure heap or upon a compost heap, and then applied as a surface manure on the grass, will produce very beneficial effects. Some of the leading farmers in Scotland utilize all the urine and drainings of their barn-yards in this manner. It is conveyed from the stables into a large tank, into which they place a pump. Near by they collect into a heap all the road scrapings and ditch cleanings they can secure on their farms, and pump upon it the contents of the tank, conveying it to different parts of the heap, with gutters. During the season the heap is turned once or twice, and when thoroughly saturated with the liquid, is conveyed to where it is wanted—more being added to the heap as it can be procured. According to Johnston, the urine of man and that of the pig, for most soils, are more beneficial than that of the horse, the cow and the sheep; they contain phosphates—the phosphates of the horse, cow and sheep remaining in the solid excrements. In applying liquid manure to growing plants, great care should be exercised that it is not applied too strong, nor the ground saturated with it, as in either condition it is apt to destroy the tender rootlets of the plants.

Urine used in an unmixed state is very beneficial to plants. It should first be allowed to putrefy, then be largely diluted with water. Pigeons' dung makes an excellent liquid manure for all kinds of plants in pots, of a succulent or soft-wooded nature. A peck put into a barrel of water and allowed to remain for a few days before being used, and when applied diluted with about one-half water, I have used with very beneficial results on roses, fuchsias, geraniums, and other fast-growing plants.

Guano used as a liquid manure should be cautiously applied, for if used too strong it has very injurious effects. It should be mixed with water to the color of weak tea before using, and twice a week is often enough for any class of plants. When a plant is injured with guano water, its leaves get yellow and fall off, the oldest and most mature dropping first.—*M. Milton, in Country Gentleman.*

## The Culture of Chicory.

Below we give an article on Chicory in California abridged from the *Rural New Yorker*. The plant is hardy enough to grow in Great Britain, and it may be worthy of trial in Canada. We require greater diversity in our agriculture, and if the cultivation of chicory prove successful, on a small scale at first, it may after a time become an important acquisition to our additional resources.

The successful cultivation of chicory depends on having the right kind of soil. It must be a rich, mellow loam, with sufficient clayey texture to make it firm and moist. It must be plowed in the fall to a depth of 12 or 15 inches, and pulverized and rolled with as much care as is usually given to a flower garden. The seed is very fine, like the carrot or lettuce, and is put in in drills about 15 inches apart. Great care must be taken to put it in the proper depth, a half inch of soil over the seed being sufficient. The seed is sown the last of February and through the month of March, if the

ground is moist enough. The seed is imported from Germany, it being found impossible to raise it in California successfully, as the plants from California-grown seed all run to tops and produce a small, tough, gummy root of no value.

The seeds, however, are not expensive, costing, delivered here, about 32 cents per pound, and only one and a half to one and three-quarter pounds are required per acre. The roots of the chicory grow about the size of the average carrot, sometimes attaining a weight of four pounds and upwards. The yield is from 10 to 18 tons per acre, if sown at the right time, upon proper soil, and with thorough cultivation; but if sown too early the plant grows woody, and runs into stalks and stems. The harvest begins about the first of August, and runs through the month of September. It is desirable to harvest them when the sun is hot, as the chicory is best when sun dried. The roots are thrown out of the ground with a sub-soil plow, men following after to cut off the tops and throw the roots in heaps. Sheep, cattle, horses and hogs are very fond of the tops of the chicory and eat them with avidity. As the foliage of the top is very heavy, making several tons to the acre, its value for feed is no inconsiderable amount, although not usually calculated upon at all.

The roots are hauled to the factory or mill, where they are chopped into blocks about an inch square, and spread on a board platform in the sun. Here they are exposed four or five days, being turned over every day. At the end of that time they are put into a revolving iron roaster, where they are baked to a crisp of dark brown color. From the roaster they are passed into the grinding mill, and after cooling off, are ground to about the fineness of ground coffee. In the process of drying and roasting the chicory loses a little more than two-thirds of its weight, so that ten pounds of the roots will make about three pounds of marketable chicory.

The cultivation of chicory, when rightly understood, is very profitable. It costs but about \$5 a ton to raise the roots, including seed, cultivation, digging and hauling, while the prepared chicory is worth from \$125 to \$250 a ton in the market. The net profits per acre are \$300 to \$500, according to the market price. At present the market for chicory is dull on account of an overstock of the foreign article.

It is said that the chicory grown in California is superior to that grown in Germany. In the latter country, about the cities of Magdeburg and Braunschweig, an immense area of country is devoted to chicory alone, millions of dollars being invested in the manufactories. Very little if any chicory is raised in the United States outside of California. One of the sources of profit in the manufacture of chicory is the use of the residue or pulp from the beet sugar factories to mix with the roots in the roasting pan. A large percentage of this inexpensive article can be put in without deteriorating the general quality. A large amount of unmarketable dust from the grinding mill is also made available by sprinkling it with molasses and water, by a secret process only known to the manufacturers.

## Sowing Salt on Wheat.

An experienced New York farmer writes to the *Country Gentleman* on this subject as follows:—

During the last four years, I have made many experiments in sowing salt on spring wheat. For over twenty-five years farming on land too hot and dry for spring wheat to fill well (in the usual manner of cultivation), it proved a very uncertain crop. Becoming nearly discouraged in trying to raise it, I began four years ago sowing salt. The first year three bushels were scattered on the ground just as the wheat was fairly up and the ground was dry. Twenty-five bushels per acre was the first year's yield. The second year four bushels of salt were sown, and twenty-nine bushels of plump wheat was raised to the acre. The third experiment was four bushels of salt, and thirty of wheat to the acre. For the past summer in Onondaga county the thermometer has marked 80° and upwards for thirty-eight days, fifteen of which were over 90°; and it was a scorching time for spring grain. For the last trial I drilled, on six acres of corn-stubble ground, one and three-fourth bushels of wheat, and sowed six bushels of salt broadcast to the acre. A strip was left without any salt, which was very light; on this ground the dew dried off quicker, and the wheat headed out two days later, with the straw darker colored and badly crinkled down. The yield this year was twenty-six bushels per acre.

## Great Britain—Its Diminished Wheat-Growing.

The lately published agricultural returns demonstrate, once more, in the unmistakable language of facts, the slow but apparently certain advent of a time when we shall be virtually dependent on foreign sources for the supply of our cereals. The process whereby lands once devoted to the production of grains of different sorts are now being gradually converted into pasturage appears continuous, and, unless checked seriously by some as yet hidden causes, the time must inevitably arrive here when, practically speaking, "corn" will in a great measure have taken the place of "wheat" to employ a popular phrase now in vogue, especially in certain districts where cattle are fast putting a period to cereal culture. The official returns show that the total number of acres under wheat in 1876 were 3,124,000, a decrease on the acreage of 1875 of eleven per cent. as compared with 1876, and of twenty-two per cent. as compared with the returns of 1869. Remembering that the population is rapidly increasing, it is evident that the real significance of these facts is even more serious than the actual percentage, considerable as that is, would warrant, and clearly year by year a still more augmented import of breadstuffs is absolutely necessary. In a word, so far as cereals are concerned, this country is approaching a time when it will need feeding in this respect quite as much as the metropolis itself needs feeding from the districts surrounding it. It must not be supposed for a moment that these facts concern farmers only, the action extends much further than that; the English millers would do wise to study the various issues involved in this great fact of the permanent contraction of the wheat-growing area of the United Kingdom. In truth, the farmer and the miller are virtually co-relative; they stand in absolute need of each other, and their interests are in essentials alike. The selfish and shortsighted might, indeed, argue that the miller could work as well on foreign wheats as on home-grown, and that, the nation paying an enhanced price for its daily bread, it would matter little to him where the grain was raised; but the miller must remember that science is abroad, that technical culture is fast sharpening the intellectual industrial of every alien country no less than those of his own, and that the import of flour on a constantly increasing scale would be one inevitable result of our continued and increased dependence on foreign sources for the supply of bread. Clearly, the British farmer and the British miller should recognize the fact that they are mutually dependent, and that whatever seriously injures the one cannot fail to react injuriously upon the other.—*London Miller (Eng.).*

## Scientific Agriculture in Germany.

An American writer says:—Agricultural science in Germany is either far in advance of our operations and scientific attainments here in America, or our scientists are a great distance behind the Germans. In Germany far more attention is paid to conducting experiments than in our country. When professors are conducting the feeding-trials at the German stations, neat cattle, sheep, goats, horses and swine receive different foods in varying proportions and mixtures, and the effects are accurately noted. Among the questions whose solution has been sought are, the chemical composition of different food materials, and the proportions of food ingredients in each, as albuminoids, carbohydrates, and fats, which are digested by different animals; the parts which they play in the animal economy; which elements are the "flesh formers" and which the "fat formers;" which make the fat (butter) and which the casein (curd) of the milk; which produce heat and muscular force, &c.; in what proportions and mixtures the animal will digest most fully and use most economically the food ingredients; and, finally, what amounts of each will be needed and utilized to the best advantage by different animals and for different purposes.

The care and patience and thoroughness with which these experiments are conducted, the amount of labor and time and money they cost, and the ways that their results are applied, would be quite astonishing to most American farmers. Careful weighings and analysis are made of the food the animals consume, the milk they produce, the excrement and urine they void, and even the air they breathe. A single experiment often requires the hard and unremitting work of several chemists day and night for several weeks or months.

The accounts of the experimental investigations on the subject of animal nutrition, published during the last fifteen years in the German

language would thus even labor in require involv and to study. has been wealth been i vast de ing, an tant to Atlant farm e poses of fitted, taught out of lucern to the ducts, oil-cak the m holic s They l scores and us least c In b farmer order t produc taining with t

Man is inju the pr of hay. to be c out a f objecti is mad very d is heav falling the la and, of tion w will be to sto affect i mals. no gre filled sprinkl and wh the du Clov the blo when p lin cap when t throw Clov the onl stock.

Wha various in the consid from th ing sho corn er until a an abu grain. One forage bushel should r ground slender with a tire. We a



**Wheat-**

urns de-  
language  
advent of  
dent on  
ls. The  
producing  
gradual  
continuous,  
yet hid-  
ive here  
n a great  
employ  
in cer-  
ow that  
in 1876  
of 1875  
876, and  
with the  
popula-  
nt that  
is even  
consider-  
year by  
eadstuffs  
as cereals  
a time  
quite as  
ng from  
be sup-  
concern  
her than  
o study  
ct of the  
ing area  
mer and  
stand in  
rests are  
tsighted  
work as  
nd that,  
its daily  
ere the  
member  
re is fast  
f every  
wn, and  
creasing  
our con-  
sources  
h farmer  
fact that  
whatever  
e-act in-  
(Eng.).

**any.**

science  
r opera-  
merica,  
ind the  
is paid  
country.  
g-trials  
o, goats,  
vaying  
re accu-  
solution  
sition of  
s of food  
drates,  
imals;  
conomy;  
d which  
(butter)  
; which  
in what  
l digest  
food in-  
each will  
tage by  
s.  
ss with  
amount  
and the  
be quite  
Careful  
ood the  
the ex-  
irs they  
ires the  
ists day  
vestiga-  
ublished  
German

language alone, would make what most people would call a good-sized library. The experiments thus described are numbered by hundreds and even thousands, each one of which has cost the labor of days, weeks or months. They have called in requisition the services of the ablest scientific men and the most successful farmers. They have involved an incalculable amount of thought, care and toil, in the laboratory, the stable and the study. The labor, much of it of a menial sort, has been performed willingly, and even enthusiastically, by those to whom it has brought, not wealth, but meagre support. Nor has the work been in vain. These investigations have done a vast deal to settle the questions about stock-feeding, and which are as perplexing as they are important to millions of farmers on both sides of the Atlantic. Combined with the results of daily farm experience, they have shown for what purposes different kinds of fodder materials as best fitted, and how much each is worth. They have taught the farmers how to make valuable fodder out of poor hay and straw; how to employ lucerne, seradella, clover and other forage crops, to the best advantage; how to utilize waste products, such as flaxseed and cotton-seed, and the oil-cake made from them; also the refuse from the manufacture of sugar from beets, and of alcoholic spirits and starch from grains and potatoes. They have shown in what proportions these and scores of other fodder materials should be mixed and used, so as to get the greatest benefit at the least cost.

In brief, this sort of work is supplying German farmers with just the information they need, in order to keep their stock and produce meat, dairy products, and whatever else comes from the maintaining of domestic animals, most rationally and with the largest profit.

**Clover Hay.**

Many farmers take the position that clover hay is injurious to stock, especially horses, and that the prevalence of heaves is attributed to this kind of hay. Clover is, however, too valuable a plant to be condemned on flimsy evidence, at least, without a full investigation. But the great source of objection to clover hay is the manner in which it is made; and it must be admitted that clover is very difficult to make, particularly when the stand is heavy. To save the blossoms and leaves from falling off in handling, it is often stored away with the largest stems partially filled with moisture, and, of course, in the sweating process, fermentation will take place to some extent, and the hay will be slightly musty and very dusty, and if fed to stock without being moistened, will undoubtedly affect injuriously the respiratory organs of the animals. Still, in case of such misfortune, it will be no great trouble to have a watering can and a cask filled with weak brine in the stable entry to sprinkle over the hay as it is fed to the horses, and which will answer a double purpose—settling the dust and give a healthy relish to the food.

Clover hay can be cured without much loss in the blossoms and leaves, if cocked in the field when partially dry, and secured from rain by muslin caps and allowed to wilt and sweat a few days, when the cocks can be turned over and can be thrown about carefully to dry and be stored away. Clover is too often imperfectly cured, and that is the only reason why it is objectionable to feed to stock.

**Corn for Soiling.**

Whatever may be said as to the value of the various plants for soiling, there is no doubt that, in the west especially, Indian corn is, all things considered, the cheapest available plant we have, from the time it can be made ready to cut for feeding until frost comes. To this end, the first sowing should be made immediately after planting the corn crop, and be followed up every ten days, until about the 10th of July. Thus you may have an abundance of feed, to follow the early sown grain.

One of the great mistakes in sowing corn for forage is the lack of seed. Not less than three bushels should be sown, and we have used four bushels per acre with decided benefit; and we should recommend three and one-half bushels as a rule. The corn will thus completely cover the ground from the first, and the stalks will be so slender and succulent that the crop may be cut with a reaper, and the produce will be eaten entire.

We are altogether in favor of drilling, rather

than sowing broadcast, when it can be done, covering the seed say one and a half inches deep, the rows about seven inches apart. Thus you get an equal distribution, and just as the corn is spouting the land may be thoroughly harrowed with a light harrow, both ways, if necessary, which will effectually kill the young weeds, and at the same time assist the growth of the corn. If sown broadcast, we should prefer plowing in the seed, say about two inches deep, by means of narrow furrows, and harrowing the soil just as the corn is about to come up, as before directed.

Much has been said, first and last, in reference to the variety of corn to be used for fodder. The ordinary Western Dent corn is fully as good as any we have ever used. It is true that sugar corn, as a rule, has more foliage than the Dent varieties, but, when it is sown thickly, both the stalks and foliage are eaten, so that it will not pay to go to the extra expense; certainly it will not pay to buy sugar corn to sow.

Very often seasonable rains keep pastures flush, thus obviating the necessity, in a measure, of soiling; but this, even if it were more usual than it is, would be no valid reason for neglecting to sow these fodder crops. If not wanted, it is easily cured for winter by partial curing and then tying in small bundles, and finishing the process in shocks made as secure from rain as possible. When properly cured, it may be stacked in narrow ricks covered with slough hay, or thatched, thus making one of the best possible winter feeds, not only for milk cows, but also for young stock.

Nevertheless, while we do not advise sowing corn exclusively for winter forage, where corn itself is so cheaply grown as it is in the West, we reiterate that no dairyman should find himself without this, or some other green crop, to assist his cows through the drouths of summer, even though he be obliged to cure a portion of it for winter forage.

**Salt in Canada.**

Having seen a communication in your last issue upon the application of salt as a manure, I fully endorse the good results of its use, as expressed by your correspondent. In Brant county, where I reside, its non-application will soon be the exception and not the rule, as the material benefit accruing to those who have used it, is such as to make us feel that our success in growing good crops, particularly barley, depends to a considerable extent upon its application. Experiments have been tried, such as leaving strips in a field without any salt, resulting in such a contrast as to cause anyone not knowing the facts to wonder at it. But the most noticeable difference within my knowledge is where a farmer sowed the salt with an attachment on a grain drill for that purpose, by which, not working properly, some drills were salted and others not, making the barley field at harvest time present a rather ludicrous appearance, as the salted drills were of a brighter color, taller, and ripened fully a week earlier than the other.

We find we received the most benefit from an application of about 240 pounds per acre. We sow broadcast upon the ground after plowing or before cultivating, as the case may be, working it in with the grain. There is no question with us whether we shall apply it or not. Of course, last season barley was generally a pretty light sample, yet in this vicinity we grew a considerable quantity up to the standard, and which, I may say, almost invariably received the aid of salt, bringing the highest market price, while the lighter grades could hardly find a purchaser.

So far as the cost is concerned, we can get good, clean salt at \$4 per ton, costing at our rate of application about 48 cents per acre, surely a very cheap manurial agent. It is considered that salt very generously absorbs ammonia, yet it is not thought to be a permanent benefit, as in the decomposition the ammonia is liberated freely.—*Country Gentleman.*

**The Spring Roller.**

Many people who lose heavily every year by having their wheat, rye or grass drawn out by the frost, might save a good portion by a judicious use of the roller in time. The plants are drawn out in the first place not so much by the frosts as by the thaw. The water in the ground freezes and the ground expands, the only room for which expansion is upwards. When the thaw comes, that which is heaviest sinks first. The plant being lightest does not sink at all. It rises when the ground rises, but does not sink when the ground

sinks. With a continuance of freezings and thawings the plant is brought up little by little till with the advent of spring only a few fibres attach the plant to the ground.

It has been noted that in thoroughly drained ground the heaving out is slight. Indeed, where there is no water in the ground there is nothing to freeze and no expansion follows. In the next place, where the water is abundant there is the greatest expansion, and the greatest losses in heaving out. Much may be done to preserve crops from destruction by making open ditches after sowing in the fall. Mere plow furrows are often enough to carry away considerable water, and make all the difference between failure and success. But in our climate, where rain and snow are often succeeded at once by frost so severe that the water has no time to drain away before it is frozen up, the best system of draining ever devised will not avail to prevent a good deal of heaving out in the winter season.

The plant drawn out in this way does not seem to be much injured till the sun gets warm. Then the evaporation soon dries up the whole plant, which can get no help to draw a supply of moisture from the soil. If we can only press the roots into the ground before there has been much of this sort of drying, they will often make new roots and grow again. Now this can be brought about by rolling. In this there is a danger to avoid. If we roll the ground when it is wet it will only harden. It is the way to make brick. The surface dries rapidly, and when the warm weather comes wet rolled land suffers very materially. It requires a nice judgement to know when to roll land. The soil should rather crush a little than make paste when rolling. Those who can exercise their judgement will find a good roller one of the best of all farm implements.—*Germantown Telegraph.*

**A Wire Worm.**

In reply to enquiries we have recommended the application of fresh slacked lime to the soil as a preventive of the ravages of these destructive pests. We made use of it ourselves and know it to be used by others for that purpose. A correspondent of the *Germantown Telegraph* prescribes for their extermination as follows:—

To extirpate the wire-worm, when the soil is very much infested with them, and which are very destructive to various crops we raise, one experiment has been tried with beneficial results. This is to sow the field with white mustard seed. I will give you a statement made by a farmer who tried the experiment, which he has tried frequently and always with success. Encouraged by the result of former trials, he writes:—

"I sowed a whole field of forty-two acres, which had not repaid me for nineteen years, in consequence of nearly every crop being destroyed by the wire-worm, and I am warranted in stating that not a single wire-worm could be found the following year, and the crop of wheat throughout, reaped the next harvest, was superior to any I had grown for twenty-one years. I am, therefore, under a strong persuasion that a wire-worm may be repelled and eradicated by carefully destroying all weeds and roots, and drilling white mustard seed and keeping the ground clean by cultivation."

Another farmer who occupied a farm in my native village; some parts of his farm was a black soil, subject to wire-worm so very much, that he sowed the field with mustard-seed, and had a splendid crop of mustard, and it corroborated the above statement in regard to annihilating the wire-worm.

Of all the ordinary grain crops, barley requires the richest and best land. A poor crop is a nuisance. It is difficult to harvest, and worth little when harvested. Good six-rowed barley, last fall, weighing 48 lbs. to the bushel, would have sold for \$1 per bushel much more readily than poor barley 44 lbs. to the bushel would have sold for 70 cents per bushel. I have had a crop of barley of 12 bushels per acre, and I have had a crop averaging over 50 bushels per acre. Of course, in the former case, I was inclined to throw the blame on the "season," and in the latter to take the credit to myself. But, in fact, the difference in the two crops was largely due to the condition of the land, the preparation of the soil, and the time of sowing. Last year my whole crop of barley averaged 39 bushels and 10 lbs. to the acre. I do not think the whole crop of the neighborhood averaged 15 bushels per acre.—*Agriculturist.*



**Cultivation of Corn.**

The weather having prevented the early plowing, sowing oats, &c., the preparation for corn is close at hand, even already upon us. If any have designed to plant extensively, and find the time short to make necessary preparation, do not let this prevent the proper working of the land. We should not hurry any more for this, unless in making longer days with the team. It will not pay to roll over a wide furrow slice; this will make you more work to harrow. Plow less, and do it well. Too many neglect to pulverize the land sufficiently after it is plowed. Never attempt to plant till the ground is made mellow by thorough harrowing and rolling, if necessary. It will not only make the planting easier, but will be better for working earlier after planted, and far better for the young plant.

On clay loam, where ditches are needed, it is well to have your lands uniform, say 32 feet wide, which is just right for eight rows of plants. If the surface is dry it is well to roll previous to working. It will show the marks nicely for the planter, and make the surface smooth. I prefer to mark both ways, as it renders planting more expeditious. Those planting extensively of this crop, of course, will use the "horse planter," but here, fifteen to twenty acres is considered a large quantity, and, consequently, is mostly planted by hand. I have used a hand planter for a number of years. Have had several that would not do the work so as to be depended on. The one used for the past nine years was manufactured by "Billings," and it does good work. My hands plant over five acres in a day. My plan is to put in from three to five grains—to average four is my object. I cannot agree with S. M. Hartford, in *Farmer* of March 24th, who recommended only three grains to a hill—claiming "it is better to spend time to put in this number than to pull out when more than three." If the gentleman could guarantee that no disaster would occur, why then, all well, if that is the desired number. But this, neither he nor any other man could do. So it is far better to spend time in pulling a little out, than filling up the missing hills. When there are two plants left in a hill I do not believe in filling up. I have never found this to answer. I would not advise any one to plant less than four grains in a hill, unless the hills are nearer together than four feet, which distance I have found to be the best. Never be afraid to use the horse and cultivator too often, or to continue too late. Keep at it as long as you can do so without breaking off the plant.

Some ignorant men will not use the cultivator in a very dry time, claiming that it will let in the drouth, and the corn will dry up more. But very few of the *Farmer* readers believe in this absurd notion. The more the soil is worked, and the better it is pulverized, so much more will it retain moisture. What hardens and lets in the drouth, is plowing and working the land when in a wet state. If any weeds should run up after through with horse work, go through with hand hoe, or pull them by hand.

By marking both ways, you have the rows quite straight. When the hand planter is used the operator should drop the planter exactly upright, and every time in the center, at the crossing of marker. I have seen corn coming up in zigzag order, which is caused by the planter being put down on the side of the mark from you, and when working back the same thing is done; hence the mistake.

It pays, after you get through working the corn, to run a one-horse plow down each dead furrow, which, if you attend to the outlet, will carry off the surface water, which, after heavy rains in late summer and fall, injures the land and often the crop, by lodging on the surface. Also, it will leave the land dryer at time of cutting and husking the corn.

Corn is the most sure and profitable crop for a broad extent of this country, and our aim should be to secure the best variety, which is that giving the greatest weight of shelled corn per acre. If any one has been planting his favorite kind, and his neighbor has a more profitable variety, let not prejudice prevent him securing seed from that neighbor.—*Ohio Farmer*.

**The Colorado Potato Bug.**

The following brief extract from the *German town Telegraph* proves conclusively the necessity of persistent and united action by all classes to exterminate this voracious bug:—

THE POTATO AND THE BEETLE.—One of the most destructive insects that ever appeared in this coun-

try is the potato beetle. Its depredations, unlike those of the grasshopper, were not confined to a certain locality, but it has steadily advanced from the far west to the Atlantic sea-board in an irresistible army which surmounted every natural and artificial obstruction to its onward march, and pillaging fields and gardens of growing crops that suited its voracious appetite. This insect during the past year cost the country, we should estimate, not less than five millions of dollars. For three months past large quantities of potatoes have been imported from Canada, and during the past six weeks heavy invoices have been received in New York and this city from Ireland, and notwithstanding the import duty, sell for the same price as the tubers of equal quality raised here. Each steamer of the American Line lands at this port from three to five thousand bushels, which retail at twenty-five cents per half peck.

**Cabbage as a Field Crop.**

Messrs. Sutton & Sons, of Reading, have published an interesting pamphlet, showing the value and importance of the above subject. The suggestions are both clear and comprehensive, so as to be well worthy of consideration. The crop is declared to be one of the most profitable that can be grown. "It will be found useful," the authors observe, "at any time of the year, but it is invaluable at two critical seasons—in the spring, after the Swedes and turnips are consumed, and in the autumn, before the root crops are sufficiently matured. Milch cows fed on cabbages have been found greatly to increase their yield of milk; and ewes, after lambing, much appreciate the nutritious food which a good cabbage affords. The soils most suitable for the successful cultivation of cabbage are those of a loamy and adhesive nature, but it also succeeds well on peat and newly broken up meadow land. Whatever the soil may be, a liberal dressing of farm-yard manure—say from 20 to 30 cart-loads per acre, with 3 to 5 cwt. of artificial manure—is recommended; in other respects the land should be prepared as for turnips. The crop, especially of the large Drumhead kind, sometimes reaches 60 or 70 tons per acre. There are two ways of cultivating cabbage: first, by sowing on a seed bed and transplanting; and second, by drilling where the crop is to stand. In many districts, owing to the difficulty of obtaining hands to do the planting, drilling has been found the most simple, as well as, in the end, the most economical mode of cultivation. If the seed bed is decided on, sowings should be made in February and March, either in rows 12 inches apart, or broadcast; but in either case the plants should be thinned, to ensure their growing into a stocky, healthy condition before planting out. The planting should be done in May and June, the early varieties about 24 inches apart each way, which will take about 11,000 plants per acre. The later kinds, such as Drumhead, should be planted 36 inches apart each way, or about 5,000 plants to the acre. One pound of seed sown on 10 or 12 rods of ground will produce sufficient plants for one acre. If drilling is decided on—and we think this the better plan—the ground should previously have been well prepared, and the seed drilled in April or May, at the rate of five to six pounds per acre. Of the early varieties, Sutton's Imperial and Sutton's Early Oxheart should be drilled about 20 inches apart; while Sutton's Early Drumhead and the Thousand-headed require 27 inches between the rows, and the larger kinds, such as Sutton's Improved Large Drumhead, 30 to 36 inches; in each case the plants should be finally hoed out to the same distance in the rows. In their very young state, oftentimes as soon as they appear above ground, the plants are subject to attack from the Aphis or fly. We have known whole sowings taken off so quickly that before the farmer is about in the morning his plant has gone, and sometimes the seedman is blamed in consequence. The best remedy is lime or soot. Anticipate the germination of the seed, and the moment the seed has sprouted be prepared to sprinkle either of the above along the rows in the very early morning—three or four o'clock—while the dew is on the ground; by this means many a crop has been saved. The autumn sowings, if on a seed bed, should be made in July or August, plants from which can either be transplanted in the autumn or left till spring, while if drilled, August is the best month." The further particulars given in the pamphlet under notice tend to support the facts above stated, and to assist the farmers in the cultivation recommended by the authors.

The above article we take from an English paper, the *News of the World*. The great value of cabbage as a field crop we know from an experience of

some years. Some allowance must be made for the climate here. Cabbage not used before the winter storms must be pitted, or otherwise stored, to preserve them till needed for use; but this is known to all our farmers. The grub proved the greatest enemy to cabbage grown here last year. A similar remedy to that given for the fly has been recommended.

**A Dominion Board of Agriculture.**

The representatives for Ontario are: Messrs. Christie, W. A. Morgan, Rev. Mr. Burnet, Stephen White, Quebec—Messrs. A. G. Jolly, Col. Rhodes, J. Perrault, Senator Cochrane, Nova Scotia—J. A. Kirk, M. P. New Brunswick—Senator Wark, Prince Edward Island—Senator Haythorne, British Columbia—Senator Sutherland.

Mr. Christie addressed the meeting on the importance of the Board, after which he was elected president, and Mr. Perrault secretary. Reports were requested from the various members of the Council on the several branches committed to their care. It was resolved to accept the invitation of the President of the National Agricultural Congress of the United States to be present at their meeting in Chicago next September, and assist in its organization, so as to secure the same representation in the Congress as is given to the States in the Union.

**The Golden Millet.**

I liked very much; though it did not mature well, as in fact, neither did the others—they were all kept back so by the dry season—but it showed its good qualities by yielding an excellent crop of forage. The stalks were abundantly clothed with rather coarse, harsh, broad leaves, and the whole plant was sweet, succulent, and tender, not woody, when cut and dried. I examined two or three fields of millet, probably "Hungarian Grass," in this vicinity, some on upland, as was mine, and other upon low ground. It was all so affected by the drouth that it did not make half a crop. I have never known this to happen before. Millet will generally produce a fair crop under almost any circumstances. The "Golden Millet" stands up well, and I think I shall like it better than "Hungarian" on that account, for I have had the crop of the latter greatly injured by lodging, being beaten down by wind and rain, and getting full of grit from the rain splattering the soil upon the prostrate plants. I am led particularly to think of these experiments with millet, because I am confident we will be, at least in my vicinity, short of hay next year, as all the grass seed sowed last year failed, though it started well and looked promising enough in May, every spear over whole acres was burned out before August. Our plan is to give the land two plowings, and a light dressing of manure, and to sow millet, seeding down at the same time, as early as the first of June, though this is a month earlier than is usually recommended. If we do not let the millet mature seed, it will not exhaust the land, and I am by no means sure it is not a more profitable crop to seed down with than oats.

RAPE AS A HONEY PLANT.—As a honey-producing plant the rape is scarcely second to the linden, producing a beautiful golden honey of good flavor, and is in blossom, commencing about August 15th, and continuing a couple of weeks. As a farm crop it is as good, if not better, than wheat. The time for sowing it is from the middle to the end of June. This gives time to prepare the soil after other crops are in; or, if wheat or corn should fail in coming up, rape can be sown in their places. It is harvested from the middle to the last of September, after all other grain is harvested. It does not impoverish the soil, but benefits it. From five to eight bushels more per acre of wheat are raised on ground which had rape the previous year. It lets no weeds grow after it is fairly started, growing very dense, and its leaves completely shade the ground, therefore it does not suffer from drouth like other grains. The seed has a good cash market at Fon du Lac, Wis., where oil is extracted from it, and brings from \$1.50 to \$2 per bushel. From ten to eighteen bushels are generally produced per acre, but it is oftener over than under this estimate. Two quarts are sufficient to sow an acre. Thousands of bushels are annually raised in Calumet county, Wis., and it is just as staple a crop as wheat. Those doubting my statement I refer to report of agriculture for 1870.—*Cor. Bee Journal*.

The H. A. to exper have been esting.

First S nest; fif and twer of right

Second on the si chicks—

Third sition of lamp-light air-sack Result, t four cock

Fourth top of th teen cock

Fifth t nest, F cocks, tw

My bro two year

Now, I somethi dicates th would tr

Another the eggs combed, from; wh sack on t

In exan one-third air-bubbl about hal have so m on a larg pullets.

If farm give their ters, with that migh soon be c There cer ise than managem is one of tion to th that caus task to be pleasure a Pa., durin all expen fowls, and chickens, besides h with. Is an interes favor of g of emulat

**To Pre**

Many fr powder in With som of remedie used by n the treatr trials, and —mine h my fowls me its inf use of oil Apply a s body of th vermin w

In apply oil can, so the oil as go a great two or thr to apply t



Poultry Yard.

Sex of Eggs.

The Poultry World for April has a letter from Mr. H. A. March, Washington Territory, relating to experiments upon the sex of eggs, which seem to have been carefully conducted, and hence are interesting. They are as follows:—

First Sitting—Eggs taken as they came from the nest; fifty-three chickens gave twenty-eight cocks and twenty-five pullets; marked—split inside web of right foot.

Second trial—Eggs picked with the air-sack more on the side than on the end. Result, thirty-five chicks—twenty-four pullets, eleven cocks, marked.

Third trial—Eggs picked with great care, the position of the air-sack marked with a pencil by lamp-light, and none set but those which had the air-sack well past the centre of the top of the egg. Result, thirty-one chickens—twenty-seven pullets, four cocks, marked.

Fourth trial—Eggs picked with the air-sack on top of the egg. Result, sixteen chickens—fourteen cocks, two pullets, marked.

Fifth trial—Eggs taken as they came from the nest. Result, thirty-eight chickens—seventeen cocks, twenty-one pullets.

My breeding-stock were White Leghorns. Hens, two years old; cocks, ten months.

Now, Mr. Editor, was it all chance, or is there something in the position of the air-sack that indicates the sex? I have been in hopes that others would try it and report.

Another fact I wish to mention. The cocks from the eggs with the sack on the side were all lop-combed, feminine looking, not one fit to breed from; while the fourteen from eggs with the air-sack on top were all fine, well-shaped birds.

In examining the eggs I find there are nearly one-third where it is impossible to determine the air-bubble, being neither on the top or sides, but about half way between. Those I discarded. I have so much faith in it that I shall try it this year on a large scale. I intend to raise one thousand pullets.

Value of Poultry.

If farmers who think poultry does not pay would give their feathered stock to their sons and daughters, with permission to enjoy and own any profit that might accrue from keeping them, they would soon be convinced that "there is something in it." There certainly is no more health-promoting exercise than that afforded by caring for, or having the management of a flock of poultry, and if the flock is one of any of the pure breeds, there is in addition to the exhilarating influence, an enthusiasm that causes what might otherwise be considered a task to become pleasure—and therefore profit and pleasure are combined. A young lady in Bethel, Pa., during the year 1874, kept a strict account of all expenditures for feed, etc., for her yard of fowls, and the regular market prices for eggs and chickens, and she cleared above all expenses \$360, besides having more stock on hand than she started with. Is not this an incentive sufficient to awaken an interest among our numerous fair readers in favor of gallinaceous stock? It is certainly worthy of emulation.—Maryland Farmer.

To Prevent and Destroy Vermin on Poultry.

Many fanciers use the carbolic (or carbolated) powder in order to rid their fowls of lice and mites. With some it seems to be considered the very best of remedies. My plan is one which, I think, is used by no other breeder, and, while I have given the treatment of others repeated and thorough trials, and found all to be deficient—not infallible—mine has never failed me in completely ridding my fowls of every insect, and has demonstrated to me its infallibility. My treatment is simply the use of oil of sassafras mixed with sweet oil. Apply a small quantity to different parts of the body of the fowl, selecting those points where the vermin would be most apt to hide.

In applying the preparation, I fill with it a small oil can, so that I can force out as much or little of the oil as I wish. A very small bit can be made to go a great ways, for one drop can be rubbed over two or three inches of space, and is no more trouble to apply than the various insect powders. I use

sweet oil because of its curative powers, but any kind of grease, no matter what, will do to mix with the oil of sassafras. The oil of sassafras is the eradicator, the other oil merely the vehicle. I believe common sassafras tea would be wonderfully efficacious. Make it in a large pot, then after allowing it to cool dip the fowls in bodily. In one second the lice will be dead, and in ten seconds the fowl will be perfectly dry, if placed in the sunshine. It is hard to form an idea of the magical effect produced by the oil of sassafras. I have never tried the remedy in greater attenuation than that mentioned (1 part to 5 or 6), but believe it would be equally good if composed of one ounce of oil of sassafras to ten or twelve of any other oil or grease.—John E. Roberts, in Southern Poultry Journal.

Brown Leghorn.

The Leghorn have a high reputation as layers. Of these Italian fowls, the brown variety have recently become very popular. They are yellow skinned, and excellent table fowls; are extremely hardy, and enormous layers. Pullets often begin to lay before they are five months old, and continue laying during the whole winter. They are gay plumaged birds, and have become very popular of late amongst fanciers, as they must also soon become amongst farmers, if they have not become so already. The Brown Leghorns are described as having the comb of the Black Spanish fowl, with its head and body, and the plumage or color of the Black-red Game. The Brown Leghorn cock is black-breasted, with hackles of orange-red, striped with black; the ear-lobes are white. The hen is salmon-color on the breast, with the rest of the plumage similar to that of the partridge, or brown, finely penciled with dark markings. A prominent English poultry fancier is of the decided opinion that this breed is the best of all our American breeds, when size and product of eggs are taken into consideration. They are non-sitters, which is a great advantage, when eggs are the product mainly desired.

There is scarcely any stock of the farm which is so poorly managed as the poultry; yet there is none that may be made more productive. A yfled of two or three dozen eggs, and a brood of three or four chickens, is generally considered a fair season's production for a hen. This is the consequence of keeping poor stock, or neglecting that which is better, and capable of doing better with proper treatment. Poultry may be improved by careful breeding, as well as a pig or a cow. An infusion of new blood should be procured every year or two, and a bird of undoubted excellence should be bought.

Push Along the Chicks.

Force along the young chicks now with the best of care and food, if you expect to exhibit at the fall shows. It will be well to pick out a few trios of the kinds to be exhibited and place them separate, that they may receive the very best care and attention. Choosing birds for exhibition is of no little importance. Many a premium has been lost by carelessness in mating up pens of birds for exhibition, as also many premiums have been withheld on account of a few ounces in weight, which might have been added in a few days by a little judicious feeding just before showing.—Am. Poultry Journal.

The Story.

Scenes from my School Life.

BY HENRY FRITH.

At length the auspicious day arrived, and we had a whole holiday, of course. Early in the morning we were all astir, and had a little gentle exercise on the bank and a good plunge in the stream before breakfast. We had some few miles to drive to the starting-place, and as the hour appointed for the race was noon punctually, we got off in good time. We were warmly cheered as we drove through Howden, although we learned afterwards that Dormer's were the favorites. We at once proceeded to the dressing-room courteously provided for us by our opponents, and here a note was brought to me by Mr. Cunningham. It was from Lillie, and ran thus:— "Mind you win, for I shall be at the post to welcome you all. If you lose this race I shall die of shame. "LILLIE." I thanked the surgeon, and then read the note aloud. I wished she had not written "all." I would fain have been up to winning point, and fortunately the town clock just then struck twelve. "With commendable punctuality," as the Howden Herald said next day, we embarked, and paddled gently to the starting-place. The banks on each side were crowded, the inhabitants of all the neighboring villages and of the county town having turned out to see the event. "I remember but little of the pre-

liminary business. I have a vague recollection of a question, "Are you ready?" to which I did not reply. My mouth seemed to close involuntarily, and there was an unsteadiness in my wrists as I grasped my oar. Our coxswain seemed quite collected as he glanced round and whispered something to Fleming, our "stroke." There was a dead silence, which was suddenly broken by the sound of a pistol-shot, and "off" was the cry. Simultaneously the oars dipped, and away Dormer's leaped with the lead. For about twenty strokes I had no idea that I was racing. I felt the gaze of the crowd on the banks; I was dimly conscious of a chorus of "Well pulled," or "Go ahead, Dormer!" but to connect it at the moment with myself or friends never entered my head. But soon I settled down and grew collected. I then began really to pull hard. Fleming, at a nod from our coxswain, quickened the stroke, and we seemed to fly through the water.

"Hurrah for Cameron's!" said some one, and the cry was as distinct then as if the speaker was beside me. I pulled, and clenched my teeth. Fleming eased the stroke again, and still we went on. Now the cheering became tremendous, and I judged the winning-post was in sight. I raised my eyes for a second, and there on horseback, attended by Mr. Cunningham, was Lillie, waving her pocket-handkerchief. "Pull!" she cried (I never shall forget the tone of her voice), "you are winning!"

I glanced at the coxswain; not a feature moved as he gazed steadily ahead. All of a sudden his head lit up, and he smiled. "Go!" said he to Fleming.

That was all. Fleming quickened up the stroke, and sent the boat through the water, trembling. A roar—a cheer—a waving of handkerchiefs, and a vision of Lillie. Then a gun, and Fleming stopped pulling.

"Who has won?" I gasped.

"We!" replied the coxswain (Peters, his name is), "and by half a length. By Jove, it was a near thing."

It was a very near thing for me, for I nearly fainted when I ceased pulling, but on landing speedily recovered.

We had a grand dinner given by the schools jointly, and we were much congratulated. In the midst of Mr. Dormer's speech, perceiving Lillie alone near the entrance of the tent, I made my way to her, sure of a welcome. I received a kind smile and a warm hand-greet.

"I am so glad we won," she said. "Are you much fatigued?"

"No, Lillie," I said. "But now tell me, dear, are you still going to be cruel to me?"

"I don't understand," she said, her sweet grey eyes turned wonderingly on mine, "I have never been willingly cruel to any one."

"Lillie, you know what I mean. I am much older, in truth, than I was two months ago. May I hope that you will try to love me?"

"Frank," she said, very seriously this time, "you must not speak of this again. I shall always be your firm friend, but you must not talk to me of love—it is impossible!"

"Impossible!" I echoed. "Why, Lillie?" An unpleasant chill-feeling came over me as she looked at me, so pityingly, I thought.

"Because, Frank, I am engaged to be married to Mr. Cunningham."

I know I left the tent, and walked all the way home that afternoon. I know I was in the highest spirits all the evening, but oh! so miserable. I remember being excessively cordial to Mr. Cunningham, and in a week I left Dr. Cameron's, and did not return until I received a piece of bridal cake and a silver-edged envelope, with two cards, and on the flap of the envelope the words—LILLIE CAMERON.

TOM URQUHART'S "TREASURE TROVE."

I never did quite believe Tom Urquhart, when he used to tell us about the treasure hidden in his father's castle. This scepticism arose from the idea which possessed us all at that time—viz., that Tom's parents did not inhabit a castle. We could have believed in the treasure, I think, could we have seized the castle. I never breathed this suspicion to my "chum," merely arguing that, if the treasure had existed, it must surely have been discovered in those "hundreds of years" (the chronology was Tom's) during which it had lain concealed. However, he this as it may, I know I hailed with delight the invitation I received to accompany my friend to Castle Urquhart for the approaching Christmas holidays, and it was with somewhat of the importance of an ambassador that I undertook to enlighten the school on my return, for the treasure was to be unearthed at last.

Having obtained permission to start on our long journey from home, Tom and I started on our long journey in tip-top spirits. My ideas of Scotland were misty, being chiefly derived from Sir Walter Scott's and Mr. James Grant's stirring novels, but I was not disappointed.

On the second afternoon of our journey, as we topped a somewhat steep ascent, Tom called my attention to a light which was burning steadily in the gorge beneath us.

"That is our beacon light," he continued, "and it is burning on the summit of the Watch Tower, where the treasure is hidden."

I was converted at once, and could have begged pardon on the spot had not other objects demanded my attention; and, while we were still discussing the merits of "curling," the driver whipped his horses, and dashing along a paved road, pulled up suddenly beneath a massive archway. Tom sprang out of the chaise, I followed his example, and found myself in a paved courtyard; this, and a frowning battlement above, dissipated my remaining scruples, and the castle was avenged!

A formidable hound rather disturbed my meditations, till Tom's noisy summons, rung out by a deep-toned bell, quickly brought his parents and sister, with several domestics, to our assistance. My friend disappeared in the loving arms of his relatives for a few moments, and then I was presented and most heartily welcomed. We retired after an early supper, and the delicious sensation of Feudalism, drawbridges, portcullis, and "retainers," which took possession of me, prepared me to discover any amount of treasure. I was conducted to a chamber situated at the end of two passages divided by five stairs (three to descend and two to be mounted). A feeling of wandering spiders down my back did not prevent my sleeping soundly, nor did I wake till James summoned me to breakfast at nine o'clock next morning. Descending, I found Jessie Urquhart superintending the breakfast-table, and waiting for her brother and myself. Tom soon appeared, and during the meal the subject of the treasure was broached. He gave his father to understand that I had come down solely to unearth the hidden deposit, craving assistance to explore the "tapestry chamber" in the Watch Tower, where the legend declared the prize to be.

"He knows all about the pirate who hid it," said Tom nod-



ding at me, "but he cannot make out the meaning of the old rhyme."

"What old rhyme?" inquired Mrs. Urquhart, entering and bidding us good-morning.

"The tapestry legend, mamma—"

"Who seeks his own with kindly eye,

Beware the knightly arm!"

"Stuff and nonsense!" was the maternal reply. "Here is Johnnie Adams come to skate with you."

"Oh yes," cried Jessie, "and you promised to teach me, Tom."

"All right," said her brother. "Come along, Johnnie," and, seizing a dark-faceted youth by the arm without permitting him to speak, he carried him to the "school-room," where skates and all implements for outdoor amusements were laid up in ordinary.

"I must show you the way, then," said Jessie, and, rising as she spoke, she conducted me to the room where the boys were already looking out for their skates.

I was introduced to John Adams, and I didn't like him. He was very dark-skinned, having been born in the West Indies, where his father was the possessor of some sugar plantations.

Adams was residing with his uncle (whose house was some few miles from the castle) for the purpose of completing his education. He was quick tempered, and Tom told me in confidence, that he (Adams) was in love with Jessie; that he (Tom) always addressed Adams as "Canes," in delicate allusion to his father's plantations, as I supposed, and that Adams had lots of money.

"Canes" so far justified Tom's rude remark respecting Jessie, who was by at least three years his senior, that he immediately constituted himself her attendant, a proceeding which I felt inclined to resent. Our rivalry led to a mere exchange of defiant looks at that time. It led to something else afterwards, as you will hear.

We got on the pond which, covered with smooth, thick ice, gave us capital skating-room. "Canes," of course, knelt at Jessie's feet and fastened her skates, while I, having inducted Mrs. Urquhart into an improvised sleigh, pushed her merrily over the frozen surface. Tom went through various figures in advance of us, and showed us the regular "North Pole Breakdown," as he termed it. This difficult figure was performed on one leg, while the other was held at arm's length by the heel, and as the performer was safe to fall twice out of every three times he essayed to cut the requisite figure, the performance was not inaptly termed. "Canes" and I both tried and failed, but as Jessie laughed at him, I was in a measure consoled. This state of things could not continue, and when after luncheon he hinted that I was a "donkey," I followed him out of the castle on his homeward way and almost

engaged him to fight! He quickly accepted, and we at once retired behind a wall of loose stone, and in three inches of snow began to pommel each other delightfully. We had several rounds, and the trampled snow showed traces of a severe encounter. Red drops fell heavily on the white carpet which Nature had so bountifully spread, until as we paused for breath after an unusually severe "round," we felt we were pained enough I had but one serviceable eye—"Canes" nose was much damaged, and his lip was cut; so was my hand. Thus bearing equal tokens of battle we suddenly agreed to a cessation of hostilities.

"Do you want any more?" inquired Adams.

"Do you?" said I.

In this manner a truce was concluded, and we parted only half satisfied, but not caring to renew the fight just then.

"I'll be even with you, you English donkey," shouted Adams, when he had got some distance on his homeward road. "He haw, he haw!" he went on, imitating the braying of the animal.

I stopped and sent a stone flying after him, which fortunately did not strike him, and then I returned to the castle.

On my arrival I evaded inquiry as to my appearance by pleading a fall on the ice, but communicated the true facts of the case to Tom.

"You'd better mind your eye," said he; "Canes" will never rest till he has done you a mischief. What an ass he is! I'll tell Jessie to shut him up."

"Pray do nothing of the sort," I said; "don't let your sister know we have been fighting."

"Very well," replied Tom, "as you wish. But 'Canes' is an ass all the same!"

Of course I did not contradict this, and the subject dropped.

After dinner that evening we held a consultation, and it was finally determined that on the last night of the Old Year we should make the long contemplated search for the hidden treasure.

I need not dwell upon our Christmas festivities. Suffice it to say that we were a merry little party. I learnt to dance a "reel," which performance on that occasion well deserved the title, for whisky toddy and the evolutions of the dance "sent me spinning," as Tom said, and I was glad to retire at one a. m. I have reason to believe that the others had breakfast before they went to bed, but of this I cannot be sure.

The important day arrived. Mr. Urquhart was obliged to go to Glasgow on business, but left us many directions and warnings as to our proceedings. Mrs. Urquhart derided the entire business, and Jessie was apparently quite uninterested, merely consenting to accompany us in order to "hold the light."

In the afternoon, to my disgust, Adams appeared, and was asked by Mrs. Urquhart to remain till the next day to assist us in our search and subsequent vigil. This he willingly agreed to do, and had the tact to conceal his real feelings towards me, but Tom gave me a hint not to trust him and his friendly overtures. "Timeo Danaos et dona ferentes," I muttered in reply, and Tom nodded. Jessie seemed to pay little attention to Adams and was apparently unconscious of his evident devotion, whereas he was wroth.

At seven o'clock in the evening, we set out on our "expedition in the following order, viz.—

First, Tom Urquhart, armed with a hammer, and a lantern to search the ghosts.

Second, myself, carrying a small iron bar (use unknown), supposed to be intended for wrenching open secret panels, and such like.

Third, Jessie, a pine torch in each hand, and wearing an air of curiosity which her assumed nonchalance could not entirely hide.

Fourth, John Adams, armed with a rusty axe for the avowed purpose of slaying rats and mice. Ghosts were also included in the category of intended victims.

Thus accoutred, we started on that last evening of December, promising to return in time to "see the New Year in," with all formality and jollity.

Descending to the basement, Tom led the way along a stone-paved passage, which terminated in an iron door. This being unlocked, disclosed a flight of narrow and winding stone steps.

We mounted, and ever and anon the moonlight, streaming through the loopholes, disclosed the worn steps, and the damp stalactites dripping on the cornices. We soon reached another door, which admitted us with some difficulty. Pushing aside a curtain, Tom bade us enter, saying, "There, we are now in the 'Tapestry Chamber' of the Watch Tower."

The sensation was scarcely pleasant. The chamber was hung with rich old tapestry which waved to and fro in the draught, giving to the figures worked upon it, which had become visible in the light of Jessie's torches, an unpleasant life-like movement. This and the shadows thrown by the moon through the ivy-clad windows, made the Tapestry Chamber a fearsome and greswome place to be left alone in on a winter's night.

Tom and Jessie had no such sensations. The former taking the torches from his sister and fastening them above the ancient fire-place, throwing the light full upon the centre figure of a group representing some king seated on his throne, surrounded by his officers and attendants. The eyes of the monarch were opened widely, and apparently regarding with much interest a particular spot in the opposite corner of the room, which was shrouded in weird gloom.

"Now," said Tom, breaking the oppressive silence, "I think that there is real meaning in the legend, and that the line—

"Who seeks his own with kindly eye,"

refers to the direction of the eyes of this king who, by the by, is the only king worked on the whole tapestry. Do you agree?"

We all did.

"Well," continued Tom, "I don't think much of the 'knightly arm' mentioned, because I can find no such thing. So our first business is to search for some indication of a hiding-place in that corner opposite; eh?"

Again his hearers applauded, and I ventured—

"Do not vex him," she replied, "he is very passionate, and never stays to think when he is angry."

We all crossed the room where Tom was marking the wall at the point the string touched.

"Strike the wall and listen for an indication of a panel or opening."

We sounded the walls in all directions without effect, even the direction of the monarch's left eye was gauged—for his Majesty seemed afflicted with a permanent squint—but without success.

"Bother," cried Tom, striking the wall a parting blow with his hammer, when, to our horror and amazement, a loud clang of metal was given forth.

A deep silence ensued, at length Tom spoke—

"There is a plate or something," and he thrust his knife against the wall, but the blade remained embedded in the wood.

"Perhaps there is a spring," Jessie suggested, nervously.

We searched and found a small button let into a circular iron plate, the whole so stained as to appear, even under careful inspection, to be part of the oaken panelling.

"The legend is right after all," Tom cried; "won't mamma be astonished?"

"Let us get inside," suggested Adams, practically.

Tom pressed the spring, the panel moved slowly back; but as he withdrew the pressure it returned forcibly to its place.

"Try again," I said, as I pressed forward to the opening, and closely followed by Adams, stepped over the wainscoting. I just caught a glimpse of a human skeleton, when a loud scream

from Jessie startled me, and made Tom turn round. I was conscious of something falling upon my head, a dull blow succeeded, and felled me down; amid a pile of bones, while the panel rushed to its place, and I was a prisoner! I became insensible!

How long I remained so I don't know, about ten minutes, I believe; and when my consciousness returned I was lying on the floor of the Tapestry Chamber, supported by Tom, while Jessie rubbed my forehead with snow. I soon distinguished Tom's voice.

"You're a murderer, Adams; why did you hit him with that axe, you spiteful beast?"

I heard the indignant denial, and I mustered strength and sat up.

"You villain," I said, "you intended to murder me I know, and I'll have you prosecuted for it."

"It's a lie," was all the answer Adams vouchsafed.

"You don't bleed much," said Tom to me; "you must have a jolly thick skull, old fellow!"

"I am glad of it," said Jessie, in a cheering tone; "you are better now, are you not?"

I replied in the affirmative, and still threatening Adams with all the penalties of the law, I reached the staircase, assisted by Jessie and her brother.

"How can we explain this?" asked the latter.

"Tell the truth, of course," cried Jessie, indignantly; "it's shameful! Mr. Adams, you need not add falsehood to your other misdeeds," she added, as "Canes" indignantly repelled her accusation.

"The panel knocked him down," he said.

"Fie for shame, Mr. Adams, your axe gave the blow, and you know it. Let me see," she added impetuously.

Snatching the weapon from his grasp, she and Tom examined it closely. There was no trace of blood upon it!

"You are too 'deep' for us, 'Canes,'" said Tom; "but uncle must have carried by this time. I'll fetch the doctor up to see you, old fellow."

Dr. McLeod was Mrs. Urquhart's brother, and was expected that evening.

Jessie and "Canes" remained apart during Tom's absence, and none of us spoke till we heard the approaching footsteps.

"What's all this," inquired the Doctor, as he proceeded to examine my hurt.

"Could this axe have inflicted that wound, uncle?" inquired Jessie.

Dr. McLeod looked hard at her, then at the axe, examined the place, and then said "No," decidedly.

"There, do you believe me now?" exclaimed Adams.

"Come, come, Tom, what's all this mystery," said his uncle, "what pranks have you boys been playing?"

Thereupon Tom told him the whole affair, ending with a request that he would be secret.

"There may be something more in this than we imagine," said the Doctor. "Let me examine the panel."

We crossed the room once more and pressed the spring. The panel moved slowly aside, and the Doctor entered.

His ejaculations as he crossed the inner room sufficiently evinced his surprise, and after an exclamation of horror, he bade Jessie fetch her father and mother instantly.

Mr. Urquhart, who had returned from Glasgow with his brother-in-law, was, with his wife, soon amongst us.

His astonishment was great when assisting us in our wild goose chase, as he deemed it, he found his sedate relative.

"Look here, Urquhart," cried the Doctor as soon as he perceived him, "this is really a curious thing;" and coming out from the inner room he exhibited to his wondering audience a blanched skull.

"This young gentleman," he continued, indicating me, "has entered that room unexpectedly, and has received a blow in almost the same spot as did the owner of this skull," and the Doctor pointed out an incision in the bony relic he poised in his hand.

"Why, that skull must have lain there for ages," said Mr. Urquhart. "I never heard of any opening in the Tower. But for Tom's persistence respecting an old legend we should not have discovered it now."

"But how could he have been killed," inquired Mrs. Urquhart, timidly.

Tom, who had all this time been holding the panel back, here screamed out—

"I know; it is the 'knightly arm' of the rhyme that gave those blows."

"The boy may be right," said Mr. Urquhart.

"Yes, papa," continued Tom, "the legend says—

"Who seeks his own with kindly eye,  
Beware the knightly arm."

"We found this door by following the 'kindly eye,' so the 'knightly arm' has done the mischief!"

Doctor McLeod, who had during the foregoing conversation been examining the inner chamber, at this juncture called out—

"I have it! What fiendish ingenuity!"

We all rushed to the opening except Tom; our astonishment mingled with a sensation of fear, which I cannot describe. But our horror may be guessed, when on joining the Doctor, we perceived behind the panel, the life-size figure of a man clad in rusty armour, and holding in his uplifted hand a rusty axe!

"But," said Mrs. Urquhart, after a pause, "how does this effect the panel?"

"You shall see," replied her brother; "stand back all of you. Tom, let go the spring," he shouted.

Tom obeyed; the panel shut to its place, and as it glided back the armed hand of the figure descended across the opening with a force which but for age and rust would have been irresistible!

"That is the 'knightly arm' then," we all cried.

"You had a narrow escape, my boy," said the Doctor, patting my head.

I thought so too, but said nothing.

Tom now opened the panel, and was shown the device which afforded him immense satisfaction, and turning to Adams begged his pardon on the spot, as did Jessie immediately afterwards.

When we had tried the novel experiment two or three times, Mr. Urquhart (now thoroughly roused) suggested further search while the ladies prepared supper. We accordingly went to work, and on removing the heap of bones, discovered a small trap-door, leading apparently to a lower chamber.

After testing the purity of the air, Adams as the lightest of us descended and soon joined Adams. After some time they both returned dusty, and with torn clothes, and when Adams was pulled up, we perceived that he carried a small iron box in his hand.

"We found this," he said, "and there is another. Can you get a ladder?"

Tom and I soon procured one, and letting it down we descended and found Doctor McLeod, who, resting, lantern in hand, in a small vault cut out of the thickness of the wall, at the end of a rough, sloping, and very narrow passage. With his assistance, we dragged the small iron chest on which he was seated, to the foot of the ladder, up which, after several failures, we succeeded in hoisting the box to the floor whereon we stood. Scarcely pausing to take breath, we youngsters pulled and pushed the prize to the head of the winding stair, down which we lowered it. Once on the terra-firma of the ground floor of the Castle, our difficulties were at an end, and we triumphantly rested our treasure in the house-keeper's room. Here we were joined by all the inhabitants of the Castle, and a few well-applied blows soon smashed the rust-eaten hinges. A goodly sight met our eager gaze. Several antique crosses, with rosaries attached; two daggers with splendidly-jewelled hilts; the remains (terribly moth-eaten) of a quantity of gold lace or cloth of gold, and various relics of more or less value. Quite at the bottom of the large box were some small leathern bags of silver coins, with some copper pieces. One of the latter is by my side as I write, and bears date 1510.

In the smaller chest we found three handsome "dags," or short pistols. There were many other things which I have forgotten.

After all had been carefully replaced, we repaired to the dining-room, where a repast worthy of the occasion had been prepared. Need I dwell upon the festivity of that never-to-be-forgotten New Year's Eve! Adams and I under the combined influence of toddy and treasure, swore eternal friendship, which I regret to say, was not so lasting as it might have been. Doctor McLeod sang a comic song, and we all joined in "Auld Lang Syne" to an extent unprecedented in Castle Urquhart, and I believe, unknown even in cheerful Glasgow, which town my friend Christie tells me is the pattern of hospitality. Be this as it may, it was very early (or very late) ere we retired to bed and got rid of the festive strains and fumes of Scotch songs and Scotch punch.

Since then, some songs and some punch may have passed my lips, but neither have had the true flavour of Castle Urquhart.

Tom and his sister are still alive; she has changed her name. It is not Adams, however; and I often think that by spending my Christmas holidays at Castle Urquhart, I did indeed light upon a Treasure.



**Minnie May's Department.**

MY DEAR NIECES,—How often do we complain unnecessarily about our homes; perhaps, because we have no piano, or have not our parlors richly furnished; others may think they have so much to do that they can find no time for doing fancy work, or to devote to reading. All this may be true; but work does not make one unhappy. Give us the girl who smiles at the first rays of the morning sun, glancing in at the little cottage window; who can bestow kind words and acts to all around her, and one who takes an interest in teaching and refining her little brothers and sisters. There can be as much refinement, gentility and happiness in a humble cottage as in a grand mansion. Dear nieces, it is not essential to the happy home that there should be the luxury of the carpeted floor, the richly cushioned sofa and chairs. No; it is neatness, order and a cheerful heart which makes home that sweet paradise it so often is found to be. There is joy as real, as heartfelt, by the country cottage fireside as in the most splendid mansions of wealth and refinement. What a lovely picture has Burns given us of the return of the cottager to his home, after the labors of the day:

"At length, his lonely cot appears in view,  
Beneath the shelter of an aged tree;  
The wee things, toddling, stagger through,  
To meet their dad, with fluttering noise and glee.  
His clean hearth-stone, his thrifty wife's smile,  
The lisping infant prattling on his knee,  
Does all his weary carking cares beguile,  
And makes him quite forget his labor and his toil."

The luxuries and elegancies of life are not to be despised, though their possession does not insure happiness. The cheerful heart will arrange the most discordant materials into harmony and beauty.

MINNIE MAY.

**RECIPES.**

**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 set to the table cold. Quince, raspberry or strawberry preserves may be served with it, and, to add to the appearance, ornament the top with slices of preserves.

**CUSTARD CAKE.**

One cupful of sugar, three eggs (the whites and yolks beaten separately), three tablespoonfuls of sweet cream, one teaspoonful of soda, two of cream of tartar, and one teacupful of flour. Bake in two flat tins of the same size.

**CUSTARD FOR THE CAKE.**

One-half cupful of sugar, one egg, and one tablespoonful of flour mixed smooth in one-half cupful of milk; boil half a pint of milk, and stir in the sugar, milk and flour; just bring it to a boil, and set it off to cool; put one of the cakes upon a plate, and spread the custard evenly over the surface; then lay on the other cake. Cut as a pie.

**TO KEEP HAMS.**

To keep hams perfectly safe all through the warm weather, place them in canvas or cotton bags, tightly enclosed, and whitewash the canvas when the hams are enclosed. Yellow ochre is frequently used for this purpose also, but lime wash is equally as good, if not better.

**BREAD JELLY FOR THE SICK.**

Cut the crumbs of a penny roll into thin slices, and toast them equally of a pale brown; boil them gently in a quart of water until it will jelly, which may be known by putting a little in a spoon to cool; strain it upon a bit of lemon peel, and sweeten with a little sugar. Cleanliness is very

essential in sickness, a dirty cup, or a bit of coal on toast, or in broth, may turn an invalid's stomach.

**ROCK RICE.**

Boil a teacupful of the best rice till quite soft, in new milk, sweeten with powdered white sugar, and pile it upon a dish; lay all over it lumps of jelly, or preserved fruit of any kind. Beat the whites of three eggs to a stiff froth, add a little sugar, flavor with what you please. Add to this when beaten very stiff, about a tablespoonful of rich cream; drop it over the rice, giving it the appearance of a rock of snow.

**SPICED MEAT.**

Three pounds of raw beef or veal (second-class steak does nicely), chopped fine, one tablespoonful of salt, one dessertspoonful of pepper, the same of sage, two teacupfuls of melted butter, two eggs and one half-teacupful of rolled cracker; mix and shape into a long roll, and bake two hours. Be sure to keep water in the tin, also put in a bit of butter and baste often. To be eaten cold for tea, and very nice for picnic dinner or lunch.

**TO MAKE STALE BREAD FRESH.**

Lay a loaf in a steamer over a kettle of boiling water; cover it closely and steam until it feels spongy, like a fresh loaf. Wrap it in a cloth and let it get cold before cutting; it will be like fresh bread. Stale biscuit and cake may be steamed the same way. Housekeepers, try this.

**TO MAKE BUREAU DRAWERS WORK SMOOTHLY.**

Bureau drawers that stick can be made to work smoothly by rubbing Castile soap upon the sides and bottom edges where they bear against the frame. Furniture makers use it.

**CRACKED WHEAT PUDDING.**

Take one quart of unskimmed milk, add to it one gill of cracked wheat, uncooked, and one gill of sugar and a small piece of stick cinnamon. Place it in an oven of medium heat. When about half done stir in the crust already formed, and leave it to form another, which will be sufficiently brown. Try when it is done by tasting a grain of wheat, which must be very soft. This, when cold, makes a delicious cream pudding.

**TO PRESERVE MILK.**

If milk be introduced into bottles, well corked, and put into a pan of cold water, and gradually raised to the boiling point, and after being allowed to cool, be taken out and put in a cool place, the milk may be kept perfectly sweet for half a year.

**FURNITURE POLISH.**

But half an ounce of shellac, the same amount of gumlac, and a quarter of an ounce of gum sandarac into a pint of spirits of wine, all in a stone bottle, near the fire, shaking it very often. As soon as the gums are dissolved it is ready for use. Then take a roller of woolen rags—soft old broadcloth will do it nicely—put a little of the polish on it, also a few drops of linseed oil. Rub the surface to be polished with this, going round and round over a small space at a time, until it begins to be quite smooth. Then finish by a second rubbing with spirits of wine and more of the polish. Furniture thus treated will have a brilliant lustre, equal to new.

**CARPETS.**

A tablespoonful of ammonia in one gallon of warm water will often restore the color of carpets, even if injured by acid or alkali. If a ceiling has been whitewashed with the carpet down, and a few drops should fall, this will remove it. Or, after the carpet is well beaten and brushed, scour with ox-gall, which will not only extract grease, but freshen the colors. One pint of gall in three gallons of warm water will do for a large carpet. Table and floor oil-cloths may be thus washed. The suds left from a wash, when ammonia is used, even if almost cold, will cleanse floor-cloths well.

**A TACK IN SEASON.**

If the corner of a carpet gets loose, prevents the door opening, or trips every one up who enters the room, nail it down at once. A dog's-eared carpet marks the sloven as well as the dog's-eared book.

**TO CLEAN OIL-CLOTH.**

If you wish to have them look new and nice, wash them with soft flannel and lukewarm water, and wipe perfectly dry. If you want them to look extra nice, after they are wiped drop a few spoonfuls of milk over them, and rub them with a dry cloth.

**AMMONIA.**

Ammonia is invaluable to the house-cleaner. A few drops in a pail of water will remove dirt from paint without much scrubbing. It is good to brighten silver; good to brighten carpets; it will take out grease spots from every fabric; will clean hair brushes, laces, muslins. A few drops in the bath tub will remove all disagreeable odor from the person and refresh the bather.

**ASPARAGUS.**

Tie the asparagus in bundles, having the heads all one way, cut off the stalks even, and put it in salted boiling water; boil till tender, which should be in from fifteen to eighteen minutes; remove from the water; spread upon buttered toast and serve.

**TO FRY CALF'S LIVER.**

Cut the liver in thin slices, and cut some slices of bacon. Fry the bacon first; then put in a warm dish by the fire; then fry the liver in the bacon gravy; season well with pepper and salt; dredge a little flour over it; turn the liver occasionally to prevent from burning, and when done lay it around the dish, intermixing the bacon; if liked, onions may be minced and fried to eat with it.

**TO GLAZE SHIRT BOSOMS.**

Dissolve two tablespoonfuls of starch in a cup of cold water, pour over this a pint of boiling water, stir it well, and let it boil two or three minutes. Add to it a small lump of white sugar, or a few shavings of white soap and a bit of butter, or a small piece of white wax, or stir it with a sperm candle. After the clothes are rinsed in blue water, starch them and dry them. Then ring bosoms and collars from this cold starch, roll tightly, let them lie awhile, and iron in the usual way; then lay the bosoms on a smooth board covered with one thickness of muslin, making it slightly damp, and polish with a polishing iron. This is a small iron with a bulge at one or at both ends. It may be bought at any house-furnishing store, and costs from seventy-five cents to one dollar.

**Personal Beauty.**

Next to complexion and hair, what is more beautiful than a good set of teeth? "Next!" I ought rather to have placed the teeth at the head of secrets of beauty. Yet, no; for there are no secrets respecting these to divulge. Cleanliness and a healthy digestion are the only means by which teeth can be preserved. By the same rule that I decried cosmetics for the face and washes for the hair, so do I now decrie dentonics and dentrifices, many of which have caused teeth to decay years before they otherwise would have done, had nature been left to herself.

And, now I am going to take a little leap upwards, and give a touch to the eyebrows—but not with kohol, ladies. No, no; I am too great an enemy to pigments of any description to allude to them in any way but condemnation. My aim is solely to invite you to keep your beauty by all natural means within your reach and knowledge, and in some cases even to help nature; as for instance, with regard to the eyebrows. The long, arched, narrow eyebrow is the prettiest, as we all know, but it is rare; but it would not be so rare, however, if a little more care were taken in its cultivation during early youth. For instance, if a child's eyebrows threaten to be thin, brush them softly every night with a little coconut oil, and they will gradually become strong and full; and, in order to give them a curve, press them gently between the thumb and forefinger after every ablation of the face or hands. Simple as this may seem, I have known the most wonderful effects result from it; I have seen girls with wide, straggling eyebrows reduce them into an arch-like shape within a year solely by this means, and surely all will allow that they are permissible. Then, again, as regards eyelashes, every mother knows that she has only to dip her baby's lashes while it sleeps, and continue the process during its childhood, to render them as long and luxuriant as a Circassian's. Yet how few think of taking this precaution, which, indeed, is as necessary as cutting the hair, for those who study their daughters' future beauty. Let ladies, however, beware how they try the experiment on their own lashes, as they do not grow after a certain age. I remember a young friend of mine, who had received from nature as rich an eyelid fringe as woman could have, and who in her young wisdom thought to make it richer still by clipping it. She did clip it, and quite short. When next I saw her there was



only a thick, dark stump around her eyes, which stump has remained ever since, for the fringe never grew again. Childhood is the time for cropping, not womanhood.

And what about the eyes themselves? There is but one thing that can beautify them, and that shall be my last word on the subject. The eye now looks upon the most prominent feature of the face, but not all the ingenuity of thought can alter; and it is fortunate, perhaps, that it is so, for, whether it be eagle-shaped, or vultured, or aquiline, or snub, we may be sure it is the most becoming to the face, and therewith be content!

A firm mouth in a man betokens character, and, as such, is often beautiful; but in woman, a firm mouth is most ungainly; firmly compressed lips, drawn-down corners of the mouth, repel rather than invite social intercourse. Smiles, on the contrary, render the ugliest mouth pretty; therefore, ladies, maidens, and matrons, smile not only in society; but also at the homely fireside; not only in the palace, but also in the cottage. Smile, and from the heart! Smiles are the true secrets of beauty of the mouth.

If a sculptor was asked, "What is beauty?" he would say the figure. But his explanation of a beautiful figure would somewhat startle our modern girls with "waspish" propensities. He would say that the waist should be twice as thick as the neck. A fashionable girl would say it should not be so thick, but should be drawn in as tightly as strong cord will draw. Speaking from my own experience, I must confess that the finest figures I have ever seen, were those which never had had a corset round them. There was the small, round, elastic waist, bending itself to every movement of the body, and the full bust, unconfined by steel and whalebone—but firm, though pliable within its bodice. It is my opinion, that if corsets were never begun they would never be required, and our women would have better figures. Italian models, who sit for painters in Italy, are not allowed to wear corsets during any portion of the day, for fear of *spoiling* their figures—*ergo*, corsets cannot be improvers. However, as the age requires such things, let them be of the very best description. They are necessary evils at the best, then let the evil be as small as possible. All that is absolutely required is to give a firmness to the waist, which, it appears, is now deemed essential to a well-fitting dress, and the short French corset is the best adapted for that purpose. It is scarcely more than a wide belt, but it braces the waist, since the waist must be braced, while it leaves the rest of the figure comparatively easy and free of action. I am sorry that the stiffest *looking* figures are the English. Why? Because they have too much corset. English ladies, as a rule, like their corsets to be very high and very long—they also like them well boned and tightened in an equal degree from top to bottom; consequently, they often look straight, stiff, and unshapely, whereas I do not believe that there are in reality better made women anywhere than in England, only they spoil themselves with iron cases. But now that France is shut for fashion, and that London is looked to for new models (as it was in the early years of the present century), why not break through the trammels which have so long disguised our women—why not discard the corset altogether? Comfort and beauty would be the reward. But as not all the preachers in England could once prevail on Englishmen to curtail the length of their shoes, I cannot hope that my poor feeble words will be noticed otherwise than by a derisive smile. And yet, if a celebrated beauty *any monde*, were but to inaugurate the fashion, how soon every other beauty of *every monde* would follow in the wake. But time is flying, and space is filling, and yet I find I owe you still a word before concluding. What is the one thing that can beautify the eyes—ay, can beautify the whole person and render the plainest woman pleasant to look upon? Without it every other beauty is spoiled—with it, ugliness is lost. What was the belt which rendered Venus without her peer in Olympus? What was, what is, and what will ever be the greatest of all "Secrets of Beauty?" *Good temper and amiability.—Land and Water.*

A bright and beautiful bird is Hope; it will come to us mid the darkness, and sing the sweetest song when our spirits are saddest; and when the lone soul is weary, and longs to pass away, it warbles its sunniest notes, and tightens again the slender fibres of our hearts that grief has been tearing away.

### The Farmer's Wife.

The farmer came in from the field one day;  
His languid step and his weary way,  
His beaded brow, his sinewy hand,  
All showed his work for the good of the land;  
For he sows,  
And he hoes,  
And he mows,  
All for the good of the land.

By the kitchen fire stood his patient wife,  
Light of his home and joy of his life,  
With face all aglow, and busy hand,  
Preparing the meal for her household band:  
For she must boil,  
And she must broil,  
And she must toil,  
All for the good of the home.

The bright sun shines when the farmer goes out;  
The birds sing sweet songs, lambs frisk about;  
The brook babbles softly in the glen  
While he works so bravely for the good of men;  
For he sows,  
And he mows,  
And he hoes,  
For the good of the land.

How briskly the wife steps about within,  
The dishes to wash, the milk to skim;  
The fire goes out, the flies buzz about;  
For the dear ones at home, her heart is kept stout;  
There are pies to make,  
There is bread to bake,  
And steps to take,  
All for the sake of home.

When the day is o'er, and evening is come,  
The creatures are fed, the milking done,  
He takes his rest 'neath the old shade tree,  
From the labor of the land his thoughts are free;  
Though he sows,  
And he hoes,  
And he mows,  
He rests from the work of the land.

But the faithful wife, from sun to sun,  
Takes her burden up that's never done;  
There is no rest, there is no play,  
For the good of her house she must work away;  
For to mend the frock,  
And to knit the sock,  
And the cradle to rock,  
All for the good of the home.

When autumn is here, with its chilling blast,  
The farmer gathers his crop at last;  
His barns are full, his fields are bare;  
For the good of the land he ne'er hath care,  
While it snows,  
And it blows,  
Till winter goes,  
He rests from the work of the land.

But the willing wife, till life's closing day,  
Is the children's guide, the husband's stay;  
From day to day she has done her best,  
Until death alone can give her rest;  
For after the test,  
Comes the rest,  
With the blest,  
In the Father's heavenly home.

### Spring Cleaning.

BY A SUFFERER.

The melancholy days have come, the saddest of  
the year,  
Of cleaning paint and scouring floors, and scouring  
far and near;  
Heaped in the corner of the room, the ancient dirt  
lay quiet,  
Nor rose up at the father's tread, nor at the chil-  
dren's riot;  
But now the carpets all are up, and from the stair-  
case top  
The mistress calls to man and maid to wield the  
broom and mop.

Where are those rooms, those quiet rooms, the  
house but now presented,  
Wherein we dwelt, nor dreamed of dirt, so cosy  
and contented?  
Alas! they're all turned upside down, the quiet  
suite of rooms,  
When slops, and suds, and soap, and sand, and  
tubs and pails, and brooms,

Chairs, tables, stands are standing round at sixes  
and at sevens—  
While wife and housemaids fly about like meteors  
through the heavens.

The parlor and the chamber floors were cleaned a  
week ago,  
The carpets shook, the windows washed, as all the  
neighbors know;  
But still the sanctum had escaped, the table piled  
with books,  
Pens, ink and paper all about, peace in its very  
looks;  
'Till fell the women on them all, as falls the plague  
on men,  
And then they vanished all away, books, paper, ink  
and pen.

And now, when comes the master home, as come  
he must o' nights,  
To find all things are "set to wrongs" that they  
have "set to rights,"  
When the sound of driving tacks is heard, tho' the  
house is far from still,  
And the carpet woman's on the stairs, that har-  
binger of ill;  
He looks for papers, books or bills, that all were  
there before,  
And sighs to find them on the desk or in the drawer  
no more.

And then he grimly thinks of her who set this fuss  
afloat,  
And wishes she were out at sea in a very leaky  
boat.  
He meets her at the parlor door with hair and cap  
awry,  
With sleeves tucked up and broom in hand, de-  
fiance in her eye;  
He feels quite small, and knows full well there's  
nothing to be said,  
So holds his tongue and drinks his tea, and sneaks  
away to bed.

### Small Talk.

Small talk is no mean acquirement; a lady or  
gentleman who can descant eloquently on a torn  
glove or withered flower, is sure to be expert in  
breaking those awful pauses which sometimes oc-  
cur in the most finished society. Silence should  
always be observed when any professional pro-  
former is kind enough to give his services in play-  
ing or singing, to amuse the company; but the  
first note struck on the piano, however fine the  
musician may be, seems to be a signal for the con-  
fusion of tongues. Be careful to make no remarks  
on those who surround you; even a confidential  
whisper may be heard by some one standing at  
your elbow, and who is possibly related or con-  
nected with the object of discussion.

### Content and Discontent.

If we estimate things wisely, rich men are more  
liable to discontent than poor men. It is observ-  
able that men of the highest fortune are apt, most  
easily, to resent the smallest things; a little ne-  
glect, a slight word, an unpleasing look, doth af-  
fect them more than reproaches, blows, or wrongs  
do those of a mean condition. Prosperity is a nice  
and squeamish thing, and it is hard to find any  
thing able to please men of a full and thriving  
estate, whereas a good meal, a small gift, a little  
gain, or good success of his labor, doth produce in  
a poor man a very solid pleasure; whence content-  
edness hath place, and is needful in every condi-  
tion, be it in appearance ever so prosperous, so  
plentiful, so pleasant.

### Good Sense.

Good sense, or what is usually common sense, is  
the basis of good taste. It teaches a man, in the  
first place, that more than two elbows are highly  
inconvenient in the world; and, in the second,  
that the fewer people you jostle on the road of  
life the greater your chances of success among men  
or women. It is not necessary that a common  
sense man need be an unimaginative one; but it is  
necessary that his imagination should be well regu-  
lated.

Good taste springs from good sense, because the  
latter enables a man to understand at all times  
precisely where he is, and what he ought to do  
under the circumstances of his situation. Good  
taste is a just appreciation of the relationship and  
probable effects of ordinary as well as extraordi-  
nary things; and no man can have it unless he is  
in the habit of considering his own position, and  
planning his own actions with coolness and accu-  
racy.



**The Story of a Hotel Bill.**

We find this amusing story in the New York correspondence of the Boston Herald.—

We are quite familiar with the extortions practiced by hotel keepers in this country upon those of their patrons who, it is supposed, will endure anything. Not long ago a young lady, who had come here from New England with her mother, with a view to taking lessons in music, went to one of the up-town houses to stay for a week or two, until she could board in a private family. The morning that she was to leave she sent for the bill for herself and mother—a lady of nearly sixty, who occupied a room, No. 45, adjoining that of her daughter. Miss—was amazed to find that her bill amounted to \$175, because she knew it ought not to be more than \$60 or \$70 at the outside. As no items were given, she returned the accounts to the office, with the request that the items should be inserted. The bill went back with two or three specifications, and the "sundries" set down at \$70. Once more she returned the bill, demanding to know what the "sundries" might be. The clerk explained, through the servant, that "sundries" was the polite term for "drinks," which so enraged the young lady that she demanded to see the extraordinary accountant in person. He made himself visible in due season, and the delicate, spiritual-looking girl confronted him by asking him if he supposed she had drunk, in eight or nine days \$70 worth of liquor. As may be imagined, he was somewhat abashed and said, with confusion, "I beg pardon, miss; it's a mere clerical error. This is 44; the drinks should have been charged to 45—the next door, you see—a room occupied by an old fellow who drinks like a fish." "Permit me to introduce to you the old fellow," replied Miss—, pushing open the door, standing ajar, and revealing to his confounded gaze one of the gentlest and saintliest looking old ladies he had ever beheld. The clerk said nothing, but dashed down the stairs and in a minute a receipted bill once more returned with the "sundries" omitted.

**Matrimonial Superstitions.**

In olden days, June was held the most propitious month in the twelve for marriage, a happy result being rendered doubly certain if the ceremony was timed so as to take place at the full moon, or when the sun and moon were in conjunction. That unimpeachable authority, the registrar-general, tells us that May is in these latter days a favorite marrying month in England, so that one matrimonial superstition has gone the way all such fancies are doomed, sooner or later, to go; for May used to be as much avoided by persons about to marry as June was favored, that merry month being supposed to be specially under the influence of malignant spirits delighting in domestic discord. "The girls are all stark naught that wed in May," is the verdict of one old saw; another declares—

"From the marriages in May  
All the bairns die and decay;"

a third pronounces, "Who marries between the sickle and the sythe will never thrive;" while a poet, complimenting the month at the expense of what should be the ruling passion in marriage-minded folk, sings—

"May never was the month of Love,  
For May is full of flowers;  
But rather April, wet by kind,  
For Love is full of showers!"

But if old sayings ruled the world, there would be no marrying at all, for a very old one avers that no man enters the holy state without repenting his rashness before the year is out; unless, indeed, everybody determined, like the old Norfolk farmer, to cheat the adage by wedding on the 31st of December. In times gone by, candidates for connubiality were obliged to study times and seasons. The Church would not allow them to marry just when they felt inclined. "Marriage," says the register of Norton, "comes in on the 13th of January, and at Septuagesima Sunday it is out again until Low Sunday, at which time it comes in again, and goes not out till Rogation Sunday; thence it is forbidden until Trinity Sunday; from thence it is unforbidden till Advent Sunday, and comes not in again until the 13th of January." That those concerned might better remember the rules, somebody put them into rhyme, running thus—

"Advent marriage doth deny,  
But Hilary gives thee liberty;  
Septuagesima says thee nay;

Eight days from Easter says you may;  
Rogation bids thee to contain,  
But Trinity sets thee free again."

It was considered improper to marry upon Innocents' Day, because it commemorated the slaughter of the children by Herod; and it was equally wrong to wed upon St. Joseph's Day. In fact, the whole season of Lent was declared sacred from the intrusion of Hymen's devotees. "Marry in Lent, and you'll repent;" and there are good people among us still who, if they do not believe that bit of proverbial wisdom to be prophetic, undoubtedly think Lenten wedders deserve to find it so. We may possibly be doing a service to some of our readers by informing them (on the authority of a manuscript of the fifteenth century, quoted in the "Book of Days") that there are just thirty-two days in the year upon which it is inadvisable to go into join-hanc—namely, seven in January; three each in February, March, May and December; two each in April, June, July, August, September and November; and one in October; so that January is the worst and October the best month for committing matrimony; the actual unlucky days being these:—January 1st, 2nd, 4th, 5th, 7th, 10th, 15th; February 6th, 7th, 18th; March 1st, 6th, 8th; April 6th, 11th; May 5th, 6th, 7th; June 7th, 15th; July 5th, 19; August 15th, 19th; September 6th, 7th; October 6th; November 15th, 16th; December 15th, 16th, 17th. As to which is the best day of the week, why—

"Monday for wealth;  
Tuesday for health;  
Wednesday the best day of all;  
Thursday for crosses;  
Friday for losses;  
Saturday no luck at all."

Friday is generally considered an unlucky day in England; but in France the country lasses look upon the first Friday in the month as peculiarly favorable, if not for the actual ceremony, at least for determining who will be one of the principal actors in it. Before getting into bed the curious damsel raises one leg, and plants it against the foot of the bed, hoping by this simple action to induce the patron of bachelors good St. Nicholas, to show her in her sleep the counterfeit presentment of her destined husband.—*Chambers' Journal.*

**THE VALUE OF TIME.**—The secret of leisure is occupation. Have eight hours a day entirely devoted to business, and you will then find you have time for other pursuits. This for some time to come, will seem to you a paradox, but you will be one day convinced of the truth, that the man who is the most engaged has always the most leisure. And remember, it is only Brahmins and Rajahs who think that they must move with head erect and uplifted gaze in order to govern men. To be a man above the world, you must, in every signification of the word, begin by being a man of the world; to have weight and influence with the people, you must understand them. We hear so much of *la haute politique*, of the dignity in history. A perfect simplicity is often the greatest refinement of diplomacy. All youth is arrogant, but arrogant above all youth is political or diplomatic youth.

**GOOD ADVICE.**—The following hint to young artists, by Sir Walter Scott, is invaluable; it is at once a guide, a warning, and a stimulative:—"I have rarely seen," he writes, "that a man who conscientiously devoted himself to the studies and duties of any profession, and did not admit to take fair and honorable opportunities of offering himself to notice when such presented themselves, has not at length got forward. The mischance of those who fall behind, though flung upon fortune, more frequently arises from want of skill and perseverance. Life, my young friend, is like a game of cards—our hands are alternately good or bad, and the whole seems at first glance to depend on mere chance. But it is not so; for, in the long run, the player predominates over the casualties of the game. Then do not be discouraged by the prospect before you, but ply your studies hard, and qualify yourself to receive fortune when she comes in your way!"

When you see a young fellow standing on a corner with a far-away look in his eyes, and a bit of yarn on the last two fingers of his hand, you may be tolerably sure that he has just begun keeping house, and that he is muttering to himself—"Chopping bowl, eggs, clothes line—that's the thumb and first two fingers. Now, what did she want on the other two fingers?"

**Uncle Tom's Department.**

MY DEAR NEPHEWS AND NIECES,—What has happened! Have you forgotten your dear, old uncle, or has he offended you by not inserting your puzzles. We have received such generous aid in our puzzle department that it would be impossible to insert all. However, we endeavor to select the best. Perhaps, some of you find it to difficult to answer, our correct answers this month being much less in number. Or, may I console myself with the idea that my little nephews have been too busy to write, for there is so much for their little, industrious hands to do in the early spring. I remember my sister always wanted a good deal of help with scraping and cleaning up the door yard, also with digging the flower beds, and pruning the rose bushes and shrubs. But where this was accomplished she took charge of the flowers for the remainder of the season herself. Then I had my own part to attend to, which was the vegetable department. It always pleased my mother to have plenty of early vegetables, which I endeavored to excel in, not disliking them myself. It is a good plan to work in the garden the first thing in the morning, before being called away to the fields to perform harder labor. My sister always preferred gardening in the early morning when pleasant and cool. Oh! such lovely flowers I recollect she had. We used to get the finest of manure; old, decayed chips will make the flowers glow luxuriantly. I tell you, my little nephews, many a bouquet I have proudly taken to my friends, which my sister has gathered and arranged for me. What can we give prettier or more acceptable. Try it, my little friends. Now, I have not said one word to my nieces about the puzzle question and mystery, but suppose we must imagine that they are busy making their spring costumes, so many frills, tuks, puffs and bows (beaux) to attend too, besides the house cleaning. Really, I had almost forgotten that, I suppose, important and necessary pleasure. Nevertheless, it makes a comfortless home for an old, fidgety customer like your uncle during the procedure, though he admires the sun shining in upon everything which looks clean and bright. Now, my little nephews and nieces, we hope the busy season will be over ere next month, and that you will all find time to answer this month's puzzles, and add one or two for our June issue.

UNCLE TOM.

**PUZZLES.**

64—NUMERICAL ENIGMAS.

I am composed of eleven letters:  
My 3, 4, 6, is what you often see after rain.  
My 2, 4, 11, 9, is disagreeable in summer.  
My 3, 8, 5, 11, 1, is what should be in every town.  
My 7, 10, 8, 11, 9, is what housekeepers use.  
My 6, 8, 9, 1, is a foreign fruit.  
My 11, 4, 5, is what we like to see every day.  
My whole is an author's name.

HARRY HUSBAND.

65—I am composed of twenty-two letters:  
My 15, 6, 7, 13, signifies pain.  
My 16, 22, 4, 9, is a blood-vessel.  
My 7, 11, 19, 3, is to insinuate.  
My 6, 7, 17, 12, 20, 14, 15, is a lady's under-garment.  
My 8, 10, 6, 7, is a disease of the skin.  
My 18, 1, 11, 21, 5, 2, is celestial beings.  
My whole forms a proverb. KITTY LOWE.

66—BURIED RIVERS.

1. I saw a bird flying in the air.  
2. Mother was kind and patient.  
3. While we were walking Nathan came.  
4. We will be even with you.  
5. It was but a trifle, Amy.  
6. Lillian took the prize.  
7. Amos, quit ordering us around. BESSIE.



67—PUZZLES

Names of flowers :

1. An article of food and a small vessel.
2. Always and a color.
3. A wild animal and an article worn by ladies.
4. To hurt, a vowel, a metal.

68—RIDDLE.

In an oval casket, with fluted lid,  
Shut by ivory clasps, this thing lies hid.  
Not fashioned by hand, and never sold,  
Its worth far greater than jewel or gold—  
A member formed in mould divine,  
Owned by you and also mine.  
Removed from its shrine it ne'er must be,  
Though used on land and used on sea.  
When running fast 'tis wiser still,  
With power to work both good and ill.  
Stirred with eloquence, tied by fear,  
Like a serpent it stingeth, or charms the ear.  
Dangerous in a fool, the wise man's defence,  
The fool of folly, the friend of sense.  
Loquacity's handmaid, prone to brag,  
Twist, and slip, and sometimes wag.  
A salver that's borne dainties rare of their kind,  
Once a pearl dissolved by a queen in wine.  
Read this riddle, find the key,  
Open the casket, and there it will be.

HOUSE GIRL.

69—CROSS-WORD ENIGMA.

My first is in twine, but not in string ;  
My second is in send, but not in fling ;  
My third is in open, but not in look ;  
My fourth is in jay, but not in rook ;  
My fifth is in tame, but not in wild ;  
My sixth is in man, but not in child ;  
My seventh is in kitten, but not in cat ;  
My eighth is in lean, but not in fat ;  
My ninth is in fist, but not in hand ;  
My tenth is in river, but not in land ;  
My eleventh is in rain, but not in snow ;  
My twelfth is in mend, but not in sew ;  
My thirteenth is in keen, but not in sharp ;  
My fourteenth is in flute, but not in harp ;  
My fifteenth is in night, but not in day ;  
My sixteenth is in kneel, but not in pray ;  
My whole is the name of a celebrated inventor.

IDA MAY.

70—ANAGRAM.

Pakes tenygl, lynkid, ot het ropo,  
Tle on rashh note be hdear ;

Hety avhe gonchu tyeh sumt rendeu,  
Thouwit na duinkn rodw.

HENRY PTOLEMY.

71—NUMERICAL ENIGMA.

I am composed of 14 letters.  
My 1, 8, 10 is a nickname,  
My 3, 6, 7, 14 is to wander,  
My 2, 13, 14 is anger,  
My 5, 11, 13, 9, 14 is an animal,  
My 7, 12, 4, 5 is a destructive insect,  
My whole is the name of a celebrated poet.

IDA MAY.

CONUNDRUMS.

- 72—What nation does a criminal dread most?
- 73—Why is a dog biting his own tail like a good manager?
- 74—What is the difference between a pastry cook and a bill sticker?
- 75—Why should a little man never marry a bouncing widow?
- 76—What is the difference between forms and ceremonies?

77—CHARADE.

My wee first writes this :  
My second-guides, I wis,  
My third rides on the sea;  
My whole an art it is—  
Now tell what can I be.

NEPHEW FRANK.

78—HIDDEN RIVERS.

Did you ever see a field mouse ?  
I felt sad when I left home.  
You might stay a little while longer.

A century is a hundred years.  
We have not sold our cow yet.  
The robins have not yet returned.

KITTY LOWE.

78—ENIGMA.

The sweetest, the dearest, the best,  
The nearest to angels on earth;  
No verse I could rhyme, no song I could sing  
Would describe all my value and worth.  
In beauty, in virtue, in love,  
In honor and truth I've no fear;  
Search the air, or the earth, or the wave,  
You never will find my compeer.  
So loyal in sickness or health,  
So gentle in sorrow or pain,  
So tender, devoted and pure—  
But reverse this fair picture again :  
So deceitful, so artful, so bad,  
Cold and false as the wave of the sea;  
To be won by a gem, to be purchased by gold,  
The earth holds no sinner like me.  
I often caress where I hate;  
I am black, yet pretend to be fair,  
I drive men to horror, to death,  
To murder, to meekness, despair.  
I incite the basest of deeds,  
I bewilder, cajole, beguile;  
I freeze by the wrath of my power,  
I repay by the warmth of my smile.  
Man claims the dominion of earth  
And loftily calls himself free;  
He is bound by a thread, by a chain,  
He is vanquished—the victor is me.

M. MELLON.

79—DIAMOND PUZZLE.

A consonant; a number; a place for selling fancy goods; a game; a grudge; dirt; a vowel. The centrals read downwards and across will give a game of cards.

STELLA FLOCK.

80.—PICTORIAL PUZZLE—GOOD ADVICE.



Answers to April Puzzles.

52—Minnie May's Department.  
P  
A L L  
B L A C K  
S L E N D E R  
F R A C T U R E D  
53—P  
L A N T A G E N E T  
P R O N G H O R N  
S T R E A M S  
T E N N  
T

54—Hard, area, real, dale. 55—Grow, rime, omen, went.  
56—Improve the stock. 57 (1)—When he has a vacancy for a pupil. (2) When it is a raising. (3) The retort. 58—The letter O. 59 (1)—Lie-u-ten-ant. (2) Di-vest. (3) Big-o-try. 60—Manchester, Rotterdam, Barcelona, Marseilles, Maidstone, Christiana. 61—The Sweet William; the Calceolaria; the China Aster; the Virginia Stock; the Carnation; Lily of the Valley. 62—Thames-meath-meat-team-tame-mate. 63—Blue-bell.

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

A. J. Taylor, H. W. Husband, Edmund Yates, Henry Ptolemy, Onchi Strawbel, Archy Jones, Sarah Dixon, Jas. Carruthers, Harriet Cox, James Ross, Ida Jane Shaw, Rosie McNorton, Lucy Priddis, Minnie Morris, John Wright, Frank Peacock, Jacob Leach, Tabitha Doust, Abraham Rivers, M. Jane Flock, Eleanor North, Joshua Harker, Samuel Anderson, Stephen Gunn, William Ford, Nanie Henderson, Jane Shore, Oliver Godfrey, Nora Hooper, Harry Trevail, A. Symonds, Louis Fairbrother, Humphrey Hamilton, Jane Beecher, Susan Hunt.

An old bachelor says that giving the ballot to women would not amount to anything practically, because they would keep denying that they were old enough to vote until they got too old to take any interest in politics.

Luck and Labor.

Luck doth wait, standing idly at the gate—  
Wishing, wishing all the day;  
And at night, without a fire, without a light,  
And before an empty tray,  
Doth sadly say :  
"To-morrow something may turn up ;  
To-night on wishes I must sup."

Labor goes, plowing deep the fertile row—  
Singing, singing all the day;  
And at night, before the fire, beside the light,  
And with a well-filled tray,  
Doth gladly say :  
"To-morrow I'll turn something up ;  
To-night on wages earned I sup."

HUMOROUS.

A man in Boston is said to be so short that when he is ill he don't know whether he has headache or corns.

"Don't you know me?" said a Kentucky soldier to his former commander. "No, my friend, I don't." "Why, sir, you once saved my life." "Ah, how was that?" "Why, sir, I served under you at the battle of Fort Donelson, and when you ran away at the beginning of the fight I ran after you, else I might have been killed. God bless you, my preserver, my benefactor!"

When a lady sitting for a picture would compose her mouth to a bland and serene character, she should, just upon entering the room, say "Bosom," and keep the expression into which the mouth subsides until the desired effect in the camera is produced. If, on the other hand, she wishes to assume a distinguished and somewhat noble bearing, not suggestive of sweetness, she should say "Brush," the result of which is infallible. If she wishes to make her mouth look small, she must say "Flip," but if the mouth be already too small, and needs enlarging, she must say "Cabbage." If she wishes to look mournful, she must say "Kershunk," and if resigned, she must forcibly ejaculate "S'cat."

IMAGINATION A CURE.—A Sacramentan who had heard and read a great deal about the blue glass cure, concluded that he would try it for his rheumatism. He accordingly procured half a dozen panes, inserted them in the window of his bath-room, and took a "sun-bath," according to the prescribed formula, for three successive days. His wife had been away from home, and when she returned she was delighted to hear that the new cure had done her husband a wondrous amount of good. He was eager to have her see the new window, and she felt considerable curiosity on the subject herself, but on entering the bath-room she burst into a fit of laughter, which was explained a moment later by her ejaculation: "That's your mazarine blue glass! Why, goosey, that isn't blue; that's green!" He doesn't feel so well now.

"It seems to me," said a customer to his barber, "that in these hard times you ought to lower your price for shaving." "Can't do it," replied the barber; "now-a-days everybody wears such a long face that we have a great deal more surface to shave over."

Young wife.—"Oh, Arthur, you know the stationer at the corner is selling off, and I have been thinking seriously of what you said the other day about saving money and things, and so I've got all he had left of this year's valentines at half the price we should have to pay next year, and they'll do just as well to send to my sisters!"

An experienced lady observed that a good way to pick a husband is to see how patiently the man waits for dinner when it is behind time. Her husband remarks that a good way to pick out a wife is to see whether the woman has dinner ready in time.

An Irishman went to the theatre for the first time. Just as the curtain descended on the first act, a boiler in the basement exploded, and he was blown through the roof, coming down in the next street. After coming to his senses, he asked, "An' what piece do yez play next?"



The grass-opera season has begun again in Kansas. Many new scores have appeared.

Two Irishmen on a summer night took refuge under the bed-clothes from a party of mosquitoes. At last one of them, gasping from heat, ventured to peep beyond the bulwarks, and espied a fire-fly which had strayed into the room. Arousing his companion with a punch, he said:—"Fergus, Fergus, it's no use. Ye might as well come out. Here's one of the craythurs searching for us wid a lantern!"

#### Ancient and Modern Traveling.

The first turnpike road was made in the reign of Charles II., and had to be supported at the point of the boyonet. It was not till the reign of Queen Anne that turnpike roads were completely established. In 1754, improved turnpike roads were made; but so averse were the people to their introduction, that tumults arose, and at the end of the reign of George II., a law had to be passed, enacting it felony to pull down a toll-bar. Up to this period, persons mostly traveled from Scotland to London on horseback. We have an account of two performing a journey from Glasgow to the English metropolis in 1739. It says there was no turnpike road till the travelers came to Grantham, about one hundred and ten miles from London. "Up to that point they traveled on a narrow causeway, with an unmade soft road on each side of it. They met, from time to time, strings of pack-horses, from thirty to forty in a gang, the mode by which goods seem to be transported from one part of the country to another. The leading horse of the gang carried a bell, to give warning to travelers coming in an opposite direction; and when they met these trains of horses, with their packs across their backs, the causeway not affording them room, they were obliged to make way for them, and plunge into the roadside."

How different from the mode of traveling now-a-days! Our trains of pack-horses are railway carriages, which, if our grandfathers were permitted to see at their speed, would frighten them back to their graves. A hundred years ago, fifty miles a day was considered to be a prodigious rate of speed to travel at. We can now travel at the rate of fifty miles an hour; take an early breakfast in London, and sup and sleep comfortably in Edinburgh within the same day.

#### Is Your Note Good?

A Boston lawyer was called on a short time ago by a boy who inquired if he had any waste paper to sell. The lawyer had a crisp, keen way of asking questions, and is, moreover, a methodical man. So, pulling out a large drawer, he exhibited his stock of waste paper.

"Will you give me two shillings for that?" The boy looked at the paper very doubtfully a moment, and offered fifteen cents.

"Done!" said the lawyer, and the paper was quickly transferred to the bag of the boy, whose eyes sparkled as he lifted the weighty mass.

Not till it was stowed away did he announce that he had no money.

"No money! How do you expect to buy paper without money?"

Not prepared to state his plan, the boy made no reply.

"Do you consider your note good?" asked the lawyer.

"Yes, sir."

"Very well; if you consider your note is good, I would just as soon have it as the money; but if it is not good I don't want it."

The boy affirmed that he considered it good; whereupon the lawyer wrote a note for fifteen cents, which the boy signed legibly, and lifting his bag of paper, trudged off.

Soon after dinner the little fellow returned, and producing the money, announced that he had come to pay his note.

"Well," said the lawyer, "this is the first time I ever knew a note to be taken up the day it was given. A boy like this is entitled to the note and money too," and giving him both, sent him on his way with a smiling face and a happy heart.

#### Little by Little.

If you are gaining little by little every day, be content. Are your expenses less than your income, so that, though it be little, you are yet constantly accumulating and growing richer and richer every day? Be content; so far as concerns money, you are doing well.

Are you gaining knowledge every day? Though it be little by little, the aggregate of the accumulation, where no day is permitted to pass without adding something to the stock, will be surprising to yourself.

Solomon did not become the wisest man in the world in a minute. Little by little—never omitting to learn something, even for a single day—always reading, always studying a little between the time of rising in the morning and lying down at night; this is the way to accumulate a full storehouse of knowledge.

Finally, are you daily improving in character? Be not discouraged because it is little by little. The best men fall far short of what they themselves would wish to be. It is something, it is much, if you keep good resolutions better today than yesterday, better this week than you did last, better this year than you did last year. Strive to be perfect, but do not become downheartened so long as you are approaching nearer and nearer to the high standard at which you aim.

Little by little, fortunes are accumulated; little by little, knowledge is gained; little by little, character and reputation are achieved.

#### Mud.

BY BARTHOLOMEW WHISTLE.

I just wish there wasn't no such thing as mud. I don't care anything about it for myself, but my mother, she just hates it. Every time I come anywhere near the house she screams out at me, "Bartholomew, wipe your feet, now mind." And my sister, Tabitha Jane, she's always a talking about my dirty boots. I'd like to know how a fellow's going to tramp around everywhere all sorts o' roads, and not get his feet muddy this kind o' weather. Tabitha Jane, she's awful willin' I should run here and run there, and she says, "O, you can go anywhere with them boots o' yourn and not get your feet wet;" but just as soon as I come into the sittin'-room, it's "O, Bartholomew, why can't you wipe them boots on the door mat? You do bring such an awful sight o' mud into the house!" and then she'll fly round and dust the piano, and the table, and the mantel-piece, and tell me it's the mud off my boots that makes all the dust. But I notice she never minds the mud Jeremiah Widdlekins brings in on his boots when he comes here, an' he don't take no great pains to wipe 'em on the door mat either, only when he's goin' away, and he and Tabitha Jane stand outside the door half an hour sayin' good-bye—then I s'pose he gets his boots real clean.

I don't see why mother and Tabitha Jane should hate mud so. It's what we're all made of, and what we're all goin' back to, and what would we do for potatoes and such things if it wasn't for mud? When I talk this way to mother and Tabitha Jane they just say, "Well, Bartholomew, dear, run right out in the dust and roll in it like a horse, if you like it." They never call me "dear" in earnest, but only when they're making fun of me. Let's see! March is most gone, and then'll come April, and then it'll be May, and then flies begin to come and I'll have another tribulation time, for mother and Tabitha Jane hate flies worse than mud, I believe. But never mind, it's always something wrong, and it might as well be flies as mud.

ENCOURAGING HINTS.—Don't be discouraged if, in the outset of life, things do not go on smoothly. It seldom happens that the hopes we cherish for the future are realized. The path of life appears smooth and easy; but, when we come to travel it, we find it all up-hill, and generally rough enough. The journey is a laborious one; and whether poor or wealthy, high or low, we shall find it to our disappointment if we have built on any other calculation. To endure it with as much cheerfulness as possible, and to elbow our way through the great crowd, "hoping for little, yet striving for much," is, perhaps, the best plan. Don't be discouraged, if occasionally you slip down by the way, and your neighbor treads over you a little; or, in other words, don't let a failure or two dishearten you. Accidents will happen, miscalculations will sometimes be made; things will turn out differently from our expectations, and we may be sufferers. It is worth while to remember that fortune is like the skies in April, sometimes clear and favorable; and, as it would be folly to despair of again seeing the sun, because to-day is stormy, so it is unwise to sink into despondency when fortune frowns, since, in the common course of things, she may surely be expected to smile and smile again. Don't be discouraged if you are deceived in the people of

the world. From such sources as these you may be most unexpectedly deceived, and you will feel sore under such deceptions; but to these you may become used; if you fare as other people do, they will lose their novelty before you grow grey, and you will learn to trust more cautiously, and examine their character closely, before you allow great opportunities to injure. Don't be discouraged under any circumstances. Go steadily forward. Rather consult your own conscience than the opinion of men, though the latter is not to be disregarded. Be industrious, be sober, be honest; dealing in perfect kindness with all who come in your way, exercising a neighborly and obliging spirit in your whole intercourse; and, if you do not prosper as rapidly now as some of your neighbors, depend upon it you will be at least as happy.

#### Two Rules for Young Husbands Correlative with Two Rules for Young Housekeepers.

- 1st. Don't fret.
- 2nd. Have a knack.

If business has been rather dull to-day, and the customers would not come, don't fret at the wife who has been watching all day for your return, and whose heart will sink when she sees the cloud on your brow. If the case has gone against you and that plaguey villian, Smith, has gained it, don't fret at the little woman who loves you, and whose only thought is for your happiness. Have a knack of coming home with a sunny face, and not make the burden heavier, which she already bears for your sake. If buttons do come off shirts, don't fret. If she did happen to overlook them this time, have a knack of letting her feel that you know it was accidental. She usually keeps them in pretty good order, and she just happened to neglect them this once. Don't fret at her, but just think if you haven't neglected some small branch of your business in the week that is past.

Yes—Don't fret. Have a knack. Good advice—but is it to be given to the wife alone? Must the wife bear all her burdens cheerfully, with never a frown or a tear, and may the husband come home and vent all his long-constrained irritation on the head of the loving one who has looked forward through all the weary day only for his coming and his smile? Can he give her, who alone of all his friends will be faithful and loving through good report, and evil too, the cross look and word, which he dare not bestow on his business friend? Must he gather up a harvest of sighs and groans and frettings and ill humors from his business, his politics, to lay at the feet of his gentle and loving wife!

No, let him throw to the winds the "cares that infest the day," and as he enters his home after a day of hard labor, let him have a knack of showing that this is the place he has longed for; let him close the doors of frettings and repinings and bring only the sunshine in, and have a knack of helping her to bear her burdens instead of making them heavier by his frettings.

#### Office Receipts.

Belford's Monthly for April. This publication is, we consider, the best family magazine published in Canada. The matter is well prepared and very interesting. It is published by Belford Bros., Toronto. We are pleased to learn that it is meeting with success.

A new publication entitled the Vegetable Garden. A good, useful work; published by Dick & Fitzgerald, New York.

Capt. O'Malley and Messrs. Stewart & Simmons hold a joint sale of Shorthorns the day after the great Canadian sale of Mr. Gibson and others. See advertisement.

#### Commercial.

#### English Market.

Liverpool, April 27.  
Breadstuffs firm; Spring Wheat, 12s. 7d. to 13s. 3d.; California Club, 12s. 11d. to 13s. 4d.; Corn, Am. mixed, 9s. 9d.; Feas, 3s. 6d., per quarter, to 4s. 9d.; Oats, 3s. 6d. to 3s. 9d.; Barley, 3s. 6d.; Cheese, 70s. per cwt.

#### New York Markets.

Flour, a shade firmer; rye flour, tending upwards; wheat 2c. to 3c. higher; corn, 1c. to 2c. better.



**Toronto.**

Toronto, April 26.

English still continues advancing; to-day's quotations showed a rise of 1c. on flour; of 3d. on red and red winter wheat; of 1d. on white; of 4d. on club; of 1s. 6d. on corn, and 1s. on peas. Montreal advanced ten to twenty cents on flour. New York was feverish and two to three cents up; but the Western markets were unsettled, closing weak, and three to four cents below yesterday. This market showed increased activity and firmness. Flour was in demand at a further advance. Extra rose 15c. to 20c.; a lot of 200 barrels changed hands at equal to \$3.50 here. Strong bakers and spring extra also advanced; lots of 500 barrels of extra sold at \$8 f. o. c. Bran was firm, and sold at \$13.75 on the track. Wheat was firm, but not very much higher; a lot of No. 1 and No. 2 spring sold at \$1.85 f. o. c. all round, but holders generally wanted \$1.90. No. 2 fall was held at \$2. Oats were firmer; a car of Canadian sold at 50c. on the track, and two cars of American at 42c. on the track. Barley was quiet, and generally unchanged in value. Peas were scarce, firmer, and wanted; holders asked \$1, and buyers would probably have paid from 92c. to 95c. Eggs were weak, and sold at 11c.

**London Markets.**

Wheat, Delhi, \$3 to \$3.30; Treadwell, \$2.60 to \$2.90; Red Winter, \$2.75 to \$3; Spring Wheat, \$2.75; Barley, \$1.60 to \$1.75; Peas, \$1.50 to \$1.55; Oats, \$1.40 to \$1.50; Corn, 90c. to \$1.00; Beans, \$1 to \$1.37; Rye, \$1 to \$1.14; Buckwheat, 90c. to \$1.14; Wool, 28c. to 30c.; Butter, roll, 25c.; Keg, 13c. to 20c.; Cheese, 10c. to 11c.; Lard, 10c. to 12c.; Eggs, per doz, 10c. to 12c.; Potatoes, \$1.50; Carrs, 25c. to 30c.; Turnips, 25c.; Onions, 7c. to 9c.; Hay, \$12 to \$13; Straw, per load, \$2 to \$4; Cordwood, \$3 to \$3.70; Clover Seed, \$7 to \$8; Dressed Hogs, \$6.75; live weight, \$4.75 to \$5; Beef, per 100 lbs., \$4 to \$6.

**Canadian Agricultural Emporium**  
ESTABLISHED 1864.

**Seeds—Best Selected Stocks:**

**Turnips.**  
EAST LOTHIAN PURPLE TOP.  
BANGHOLM PURPLE TOP.  
HALL'S WESTBURY.  
MATSON'S PURPLE TOP.  
SUTTON'S CHAMPION PURPLE TOP.  
SKIRVING'S IMPROVED PURPLE TOP.  
SHAMROCK PURPLE TOP.  
Sheppard's GOLDEN GLOBE or BRONZE TOP.  
DRUMMOND'S IMPROVED PURPLE TOP.  
All the above at 25c per pound.  
LAING'S IMPROVED PURPLE TOP, 35c.  
WHITE SWEDE, Largest Size, 40c.  
**Mangel Wurtzel.**  
LONG RED MAMMOTH LONG RED.  
YELLOW GLOBE.  
LONG YELLOW. RED GLOBE.  
All the above at 30c per pound.  
CHAMPION YELLOW INTERMEDIATE, 50c.  
Elvetham LONG RED, 35c. ORANGE Globe, 50c.  
**Carrot.**  
ALTRINGHAM LONG RED, - - - \$0 75  
WHITE BELGIAN, - - - - - 35  
YELLOW BELGIAN, - - - - - 50  
LONG ORANGE, - - - - - 75  
SCARLET INTERMEDIATE, - - - 75  
IMPROVED WHITE GREEN TOP ORTHE, 40  
15% off above prices in four-pound lots and over when sent per freight or express.

**Potatoes:**  
BURBANK'S SEEDLING, - - - per lb. 50c  
EARLY OHIO, - - - per lb. 50c. pk. \$1 00  
SNOW-FLAKE, - - - " 25c. " 75  
ALPHA, - - - " 25c. " 1 00  
SUGAR CANE, 25c per pound.  
Selected Western Corn, Vetches, Hungarian Grass  
All kinds of Seeds sent by mail postpaid by the pound; over 4 lbs. by express or freight, unpaid.  
Bags, 10, 20 and 30 cents each.  
Planet Drills, Cultivators, Union and Blanchard Churns, Lawn Mowers, &c.  
Fertilizers, Superphosphates, Bone Dust, &c.  
Catalogues free by mail on application.  
W. H. BROWNE, Manager.

**WANTED.**—A few dozen English Sparrows.  
Address, "S. D."  
care of Advocate Office, London.

**TWO Ayrshire Bull Calves for Sale.**  
For pedigree and further particulars, apply to THOS. NEVIN, Lot 6, 2nd Con. N. Dorchester. Box 129, City P.O. DE-3



BEST HAY PRESS ADDRESS FOR CIRCULAR R. W. DEDERICK & CO. GRAND CENTRAL PREMIUM 10 TONS IN A CAR. DR-12

**Arnold's American Dairying Manual for Butter and Cheese Makers.**

"The result of long experience, intelligent research, careful experiments and correct judgment." Price, \$1.50.

**The People's Practical Poultry Book.**

A work on the breeding, rearing, care and general management of Poultry. Well illustrated. Price, \$1.50.

**The Farmers' Veterinary Adviser.** By PROF. LAW, Cornell University, Ithica, N. Y.

"Will direct the common farmer how to relieve the distressed animals whenever relief is practicable." Price, \$3.

The above will be mailed from the office of this paper, postpaid, on receipt of price.

**HEATH & FINNEMORE,**  
WHOLESALE AND RETAIL  
**SEED MERCHANTS.**

Sole Agents for  
**McMaster & Hodgson's Celebrated Liquid Annatto Rennets.**

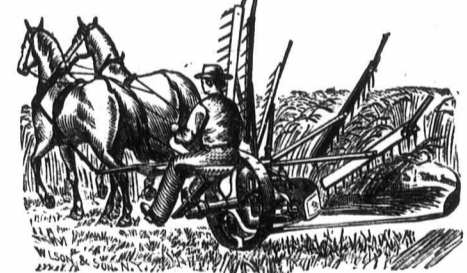
SCALE BOARDS, CHEESE BANDAGES, AND ALL OTHER CHEESE FACTORY REQUISITES CONSTANTLY ON HAND.  
KING ST., MARKET SQUARE  
**LONDON, ONTARIO.**

**HAMILTON AGRICULTURAL WORKS!**

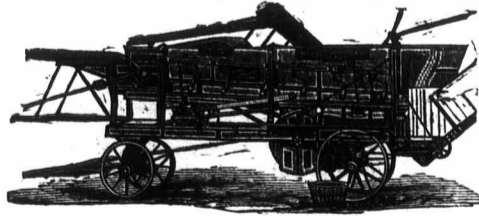
Awarded the only International Prize Medal, and also Silver Medal at the Centennial, given to Canada for Mowers and Reapers.



"IRON-CLAD" MOWER. Warranted First-Class. Has no superior in the World.



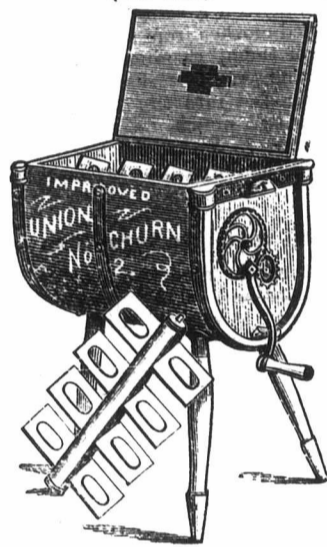
CANADIAN HARVESTER. Adapted to all kinds and conditions of grain. LIGHT DRAFT ADJUSTABLE TRACK, instantly adapted to LOGGED GRAIN. Guaranteed as represented, or money refunded.



"GRAIN-SAVER" THRESHER. Warranted Superior to any in the Market.  
Send for Illustrated Catalogue. Address—  
**L. D. SAWYER & CO., Hamilton, Ont.** DB-12

**Improved Union Churns.**

(Pat. 1876.)



1st Prize at Hamilton, Provincial Exhibition, 1876.  
1st Prize at London, Western Fair, 1876.  
1st Prize at Guelph, Central Fair, 1876.  
The above Churn forwarded to any reliable farmer in Ontario on three weeks' trial. Satisfaction guaranteed, or no sale. Send for Catalogue and Price List. Agents wanted in every county in Canada.

**McMURRAY & FULLER,**  
DB-1f 31 Front St. East, TORONTO.

**HORSE RAKE.**

**THE BRANTFORD SELF-DUMPING RAKE**

has the best established reputation of any Rake manufactured.  
The teeth raise 12 inches above the winrow.  
It will make a larger winrow than any other rake.  
The hay will not scatter out at the ends.  
It can be dumped by hand.  
The wheels running on any elevation will not raise the teeth from the ground.  
For circulars address—

**A. ROWELL, Brantford P.O.**  
Agents wanted where not yet established. dc-3

**General Land Office,**  
WINNIPEG, MANITOBA.

Farms, improved and unimproved; Half Breed Scrip, 160 acres each; Allotments of Half Breed Minors, 240 acres each, those of age only, 1/4 of the whole; Winnipeg City Property, &c., &c., bought and sold. Investments procured and managed; Business Transacted with the Dominion Land Office; Taxes Paid and Property Managed for Absentees. Information respecting Investments, Locations and Values given, and all the departments of a General Land Office attended to.

**A. W. BURROWS, Main St., Winnipeg.**  
P. S.—All communications requiring answers must enclose postage stamp. dc-6

**Manitoba.**

Half-breed lands, near railroads and city bought for investors or settlers at from 30 to 52 cents. INVESTMENTS made on undoubted real estate security at 12 per cent. Send 3 stamps for circular, and eight for map.

**ARCHIBALD YOUNG,**  
dh-tf 37 Colborne street, Toronto

**WANTS.**

One Ayrshire Bull, 2 years old.  
J. GEERY, London.  
One Ayrshire Bull, 1 year old.  
H. CONNER, Springfield.  
[Some of our advertisers inform us that they have sold all the bulls they wish to part with. We have had more applications for Durham and Ayrshire Bulls this year than ever before.]

**DERBY CATTLE FOOD**

Produces Muscle, Nerve, Blood and Fat. It fattens in a reasonably short time. It is Tonic and Stomachic. It supplies that nourishment for winter feeding which animal nature requires for promoting a good, healthy action of the general system. It will bring out your Horses and Cattle in Spring in tip-top order. Every farmer should use it. Guaranteed by hundreds that have used it to give satisfaction. A dollar box contains 300 feeds. Don't be persuaded to take any other preparation, only the "Derby." Ask your storekeeper for it.  
dc-4 **JOSEPH DILWORTH, Veterinary Druggist, Toronto, Ontario.**