

FARMER'S ADVOCATE

PERSEVERE
SUCCEED.

AND HOME MAGAZINE

FOUNDED, 1868.

WILLIAM WELD, - - EDITOR AND PROPRIETOR.

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The FARMER'S ADVOCATE and HOME MAGAZINE

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

Any intending subscriber should send for a sample copy.

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FARMER'S HAND BOOK FOR 1884.—Our stock of this book is now completely exhausted, and further orders cannot be filled. The Hand Book for 1885 will be issued early in December next; price, paper, 25c., and in cloth covers 50c. each. Orders can now be sent in.

We are now prepared to get up first-class engravings of live stock, buildings, implements, etc. These illustrations will be brought out by the best artists and engravers in Canada, and inserted, with appropriate descriptions, in reading columns of the ADVOCATE. Satisfaction guaranteed; extra copies supplied. Write for further and full particulars.

The Ladies' Manual of Fancy Work.

The price of above useful work is not 30c. as stated by a printer's error in July number, but 50c. per mail.

Choice Premiums.

Our subscribers should read our list of choice, new premiums offered in another column of this issue for sending in new subscribers. They consist of the latest varieties of fall wheat, strawberry plants, flower seeds, etc.

Our Monthly Prize Essay.

Our prize of \$5.00 for the best essay on "The Best Methods of Economizing Work on the Farm," has been awarded to D. J. Morton, Leith. The essay appears in this issue.

Sheaves from Our Gleaner.

Bathe often.
Drive, or be driven.
Never sell your best cow.
Keep an eye on the markets.
Farming is a matter of details.
Ventilate houses and stables well.
Clean horses' shoulders and collars.
Talk about exhibitions and farmers' clubs.
Four corner-stones—cropping, stocking, manuring, draining.
Why haven't you a soiling crop to keep up the flow of milk?
No thieves in well guarded houses, no weeds in well guarded fields.
A debatable question: Are rats more destructive than fire?
Keep your bank account low and your manure heap high.
The farm should compare in size and quality with the farmer's brain.
The wheat midge is committing ravages in the vicinity of London.
In this season idle boys and idle land will give you endless trouble in the future.

Correspondents.

Correspondents from all sections are cordially invited to send us their favors, when they have something to say; short, practical and readable articles, as well as seasonable ones, are always acceptable.

We want live, energetic agents in every county to canvas for subscribers to our paper, believing it will be of mutual advantage to patrons as well as to publisher. We pay a liberal commission to agents who devote their time to our work. Write about it and send for specimen copies. Address—

THE FARMER'S ADVOCATE SUBSCRIPTION DEPT.,
London, Ont.

Editorial.**Farmers' Exhibitions.**

A correspondent in another column complains of the efforts which are being made to destroy the township exhibitions, and build up those having a Provincial character. This is a question of vital importance to our farmers. It has been said that the township exhibition is a practical school for adult farmers. Although this is the grandest conception of it, yet there are other considerations which must not be entirely overlooked. It comes in a season of the year when the more youthful farmers, after a long siege of incessant toil, seek the long expected day of recreation mingled with pleasure; and then the business aspect must not be lost to the view. The tendency of the times necessitates the greater encouragement of the educating phase of exhibitions. The rapid spread of various breeds of cattle and sheep, and the consequent strides in our live-stock and dairying interests, the introduction of so many varieties of grains and fruits, all these have a direct bearing on the welfare of every progressive farmer and impel him to come into contact with his fellows in every possible manner for the purpose of mutual improvement. Moreover, it cannot be denied that the mass should be educated, not the favored few. If, then, our township exhibitions were abolished and the Provincials encouraged, the result might not inaptly be compared to the abolition of our public schools, and taxing the farmers for the maintenance of a Provincial University.

How many farmers have the leisure or the means whereby they can attend the Provincial or the Industrial? Those who are able to attend have it in their power to materially aid the township exhibitions in their localities, by introducing and exhibiting the leading breeds of cattle, horses, sheep, swine and poultry, or the newest varieties of grains and fruits for the benefit of themselves and their neighbors. But what do they usually do? They gamble in Provincial prizes, and if they condescend to compete in the townships, those farmers who have equally good exhibits, but can only afford to work for sure returns, are lost sight of in the competition. Such scheming would have some ground for defence if it could be proved desirable, in the best interests of the community, to encourage the production of huge and costly rolls of fat or abnormal growths of vegetable productions.

Assuming that every individual or corpora-

tion works specially for his or its own personal interests, let us examine what array we have against the township exhibitions or the real farmers' interests. The large importers and breeders of live stock will be in opposition so long as there is room for speculation in prizes and pedigrees. The manufacturers will continue to act aggressively so long as it will be easier to bring Mahomed to the mountain than the mountain to Mahomed. The railway companies will not co-operate with the farmers so long as it remains more profitable to bring the people to the exhibitions than the exhibitions to the people. Pleasure-seekers will follow in the train so long as the sensation continues to form the most prominent feature of the shows. If the show is to be a circus, why not call it by its proper name?

We have not yet mentioned the greatest blow which the annihilation of the township exhibitions would bring upon the farmers. These exhibitions are usually the outcome of farmers' clubs, and if they were weakened or destroyed, the farmers would have less incentive to unite, which would eventually lead to the total abolition of farmers' organizations.

But it must not be inferred that we are opposed to the existence of Provincial shows so long as they do not clash with the farmers' interests. If there is to be a conflict of wealth and influence against numbers, the only chance for justice on the part of the farmers is for them to unite, discuss, agitate, petition, and use every other legitimate means to force the aggressor to know and feel that their rights are not to be trifled with.

Judging Breeds by their History.

There is too much attention paid to the judging of cattle by points and pedigrees, and too little is known concerning their history. It is true that pedigree is history in part, applied to the performances of the noblest strains of a race; but where a breed is the offspring of long and uniform improvement, under the same natural conditions, whereby the highest degree of eminence is attained in the beefing or in certain lines of the dairying qualities, under a systematic process of breeding from the best and weeding out the worst, the history of such a breed is the best index to its character and to its consequent desirability for the object sought. Many a breed has depreciated in repute by a sudden transition from its native conditions, so that an historical knowledge becomes more essential to the expert than a knowledge of its performances at the pail or on the block. The first care of the breeder should therefore be to preserve these native conditions as far as possible, making the adaption to different management and climate as gradual as possible.

Let us illustrate an example. Take the Holstein which is at present talked so much about both for the dairy and as a means of building up other breeds for dairy purposes. Holland, the home of the Holstein, possessing a climate somewhat akin to our own, should have a greater attraction for our stockmen than any other country famed for its stock, supposing other conditions to be equal. Above all other countries in the world, Holland is moreover renowned for its grass and its cheese. There is a close relationship existing between the natural grasses of a country and the character

of its breeds of cattle. The natural permanent pastures are rye grasses and different varieties of fescue; and there being little grain raised, it is marvellous how any breed could be brought to such a high repute on the grasses alone. In winter the food is exclusively hay, and the haying season being usually wet, the quality is frequently inferior. The improvement of the Holstein is the breeding ingenuity of upwards of twenty centuries, the ultimate object being the perfection of skim-milk cheese. We have seen farmers who objected to cows that were great consumers, and yet the encouragement of consumption has been the chief means of establishing the excellency of this breed—not in that gorging manner which has characterized the weakness of the Shorthorns, but it has constantly received that unpampered plenty which is one of the main secrets of breed building. Even the calf that never sees its dam only enjoys new milk for a few days, the subsequent rations being whey and hay-tea; and it is forced to shift for itself on the grass at the age of six weeks. From these conditions it will be seen that the Holstein is not a grazer, that is, it cannot flourish on scanty, hill-side herbage, like the Ayrshire or the Devon, nor will it stand pampering like the Shorthorn, nor straw-stack exposure like our native, it being accustomed to complete shelter from wintery blasts.

Notwithstanding the grand performance of the Holstein at the pail, the beefing qualities have not been entirely neglected. The Dutch, although they live well, are not a flesh eating people, and have not that delicacy of palate which characterizes the English, so that the flesh of the Holstein, when the animal is slaughtered young, is much relished by the Dutch. The cows are slaughtered in their seventh or eighth year, and the bull calves not requiring to be raised for service, are slaughtered for veal. The percentage of cream is not so high as in some other breeds; but the quantity of milk is so great that the aggregate quantity of butter is excelled by no other breed except the Jersey. The Holstein is a notable example of breeding to secure a certain end, and yet, if the beefing and butter qualities had been entirely neglected, the already extraordinary results with regard to the dairy would have been still more striking.

The production of cheese being far more exhaustive to the soil than the production of beef or butter, the question may now be asked, How do the farmers maintain the fertility of their land? The answer would be a deviation from the scope of this article, but the hints would be so valuable to our farmers that we purpose giving a few.

The liquid manure is collected in capacious tanks, and then sprinkled over the pastures. The solid voidings being unmixed with litter do not require fermentation, and are mixed with alternate strata of earth, forming huge, wedge-shaped mountains of compost heaps, built in such a manner as to ward off the rain. Just think what an immense quantity of labor such a system of dairying demands, about eight or nine laborers for every hundred acres of land, and yet this is the only way in which money can be made. In Friesland the average rent amounts to \$28 per acre, besides high taxes, the land being worth \$600 to \$700 an acre. But

what of that so long as the carrying power of the land is sufficient to produce a handsome profit? A hundred acres will carry a hundred head of cattle and about twenty sheep, besides two or three horses, and when it is considered that the average price of dairy products is not much higher than in Canada, it will be readily seen what may be accomplished by science in farming.

Mistakes About Dairy Breeds.

In a recent tour through several dairy districts we had an opportunity of examining various herds and their comparative milk records, as exhibited in the books of the factories. In most localities it is difficult to find a herd which is not to some extent graded. Although accurate accounts are kept with regard to the yield of milk, yet farmers have not yet sufficient data upon which they can act intelligently in the improvement of their herds. Their ideas with regard to feeding and management are so wide asunder that it is difficult to draw any accurate conclusions from their own statements. For example, one farmer whom we visited has a fine herd of Ayrshire grades, producing on a daily average, since May 1st, 28 lbs. of milk per cow. He believes in breeding for dairy purposes only, feeds nothing in winter but straw and turnips, and has his heifers drop their first calf at two years old. His neighbor has a herd of Shorthorn grades yielding an average of 31 lbs. per cow during the same time. He is a believer in supplementing milk with beef, finds it necessary to feed liberally in winter, and has no cows under three years old. Both keep their cows as long as they are able to masticate their food, which they say is until their thirteenth or fourteenth year. These men are the champions of their neighborhood so far as the product of their herds is concerned. The owner of the Shorthorn herd contends that there are no cattle so well adapted to the dairy as Shorthorn grades, but confesses that for profitable purposes there is a danger in grading too high. The Ayrshire man stakes his reputation on Ayrshire grades, but admits that they are too small, and has commenced to use a Shorthorn-grade bull for the purpose of increasing the size of his cows.

These herds having had corresponding records in previous seasons, the sympathy of the neighborhood appears to be strongly in favor of the Shorthorn grades. A more erroneous impression could not possibly be gathered from these data. The milk is sent to the factory only during six months, so that the quantity of milk per milking season is not ascertained, but it is a well established fact that the Ayrshire milks a much longer season than the Shorthorn. A liberal system of feeding in winter has probably more to do with a liberal yield of milk in summer than any other cause, no time being lost in recuperating the loss in condition. Another important item for consideration is in the percentage of cream. It is more than probable that the milk of the Shorthorn grades has a higher percentage of cream, which would make the production more valuable, although the profit to the owner is not any greater on this account. For cheese, it is therefore advisable to breed for quantity of milk, not for quality. In all matters pertaining to dairy cows the question is, What yield can be obtained

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from a given quantity of food consumed? This question cannot be answered from the facts and figures given, and the prejudice therefore rests on no foundation. In comparisons of this kind great stress must also be laid on the relative ages of the animals.

With regard to the comparative sizes of the cows in the two herds, the Shorthorn grades have the advantage. It is well known that, say two large cows are more profitable than three of the same weight, all other conditions being alike, the proportionate food of support being less in the large animals, chiefly for the reason that they have less external superficies for the radiation of heat and moisture. We therefore admire the ambition of the Ayrshire man in his attempt to increase the size of his cows, but his mode of doing so cannot be defended from any standpoint whatever, except as to size. If he only obtained an increase of size, little objection could be made, but he gets more; he gets an increasing tendency for more beef and less milk, thus defeating his own pet principle—that of breeding for dairy purposes only. He also gets a more debilitated constitution, a shorter milking season, and a great risk is run with regard to the usefulness of the offspring for the dairy. No farmer who has ever seen a first class agricultural paper would think of attempting to permanently improve any herd by the use of a grade bull. A graded herd especially will rapidly degenerate under this method of supposed improvement.

These facts lead to very practical and important conclusions. The farmer who is accustomed to feed liberally and manage tenderly, may succeed well with a good dairy herd of Shorthorn grades; otherwise it may be improved by the use of Ayrshire or Holstein bulls. An Ayrshire grade herd or a herd of common stock, where size is desirable as well as quantity of milk, can be best improved for the production of cheese by the use of a Holstein bull. But farmers who have a well established Shorthorn grade herd, produced by careful selection from the best strains of Shorthorn blood, would undertake improvement at a considerable risk. Such herds, however, are exceedingly rare.

Feeding for the Show.

A subscriber writes to us asking how he should feed a bull for the shows this fall. This being a question which every farmer and stock raiser should take into mature consideration at this time of the year, we give it special prominence. Our correspondent does not tell us the age or breed of the bull, or at what shows he intends to exhibit, but the general principles involved in the fattening of all show stock will be a guide to him. In the first place, if he wants to feed for a Provincial prize, he cannot do so on any known method without injury both to the bull and to his offspring. The flesh of highly fed animals is a diseased condition of their constitution; and although it is tender and palatable to the tastes of some people, it is neither so nutritious nor so wholesome as that of moderately fed animals. This is strikingly illustrated by the fact that the flesh of wild animals is considerably more nutritious than that of our domestic animals. This predisposition to disease is transmitted to the offspring, and if the existing methods of high feeding are

persisted in to a material extent for any considerable length of time, disease will become as prevalent in Canada as it is now in Europe. This danger increases with the increasing tendency to offer larger prizes at our exhibitions. It is a disguised mode of gambling. Such animals are also impaired in their reproductive functions; their constitutions become weakened, and in no case should the offspring be kept for dairy purposes.

Notwithstanding all this there is a strong inducement for farmers and stockmen to raise a class of animals of this stamp for the show ring and the shambles; and so far as the latter is concerned, we would not be taking the financial interests of the farmers into consideration, if we advised them against raising such a class of stock, so long as it has the greater demand. Early maturity by high feeding is an important point gained for the producer, so far as quick returns on the investment are concerned,—also with regard to gain in weight in proportion to the quantity of food consumed, but this does not necessarily increase the actual profits as they are regulated by the relation of the supply to the demand. The lower cost of production means cheaper beef for the consumer, and a correspondingly inferior quality,—not so far as tenderness is concerned, but with regard to the nutritive properties and flavor. Another point in favor of the producer must not be overlooked, viz., that the fat does not take a particle of nutriment out of the soil; the fertility of the soil is expended on the other parts of the animal, especially the bones, so that the farmer who is merely actuated by pecuniary motives should raise a class of animals with as much fat as possible, and as little bone and muscle. The production of muscular tissue is retarded by the lack of exercise, and this is an important consideration in sustaining or increasing the early maturity of the animal.

From this point of view, if the producer is justified by his pecuniary interests in raising a class of animals to suit the appetites of certain consumers, he may also be justified in bringing them to the show ring, even though in his zeal for speculation the value of his prizes is but a miserable compensation for the enormous cost of production.

Our advice then to our inquirer is this: If he has a bull which he wishes to use for the building up of a dairy herd, by no means should he feed him high for the show, but keep him in moderate condition, take him to the township shows, agitate for the appointment of sensible and honest judges, and he will stand as good a chance for a prize as any competitor at the fair. If, however, he has a mania for speculation or gambling, and wishes to build up a beefing herd for the purpose of satiating the morbid appetites of weak-stomached epicures, let him bloat up his bull for the Provincial or the Industrial, and the way he can most successfully do so will be found in the proper column.

The Connecticut Farmer says there is no fertilizer so well adapted to the Connecticut soil as Canadian ashes, of which there are immense quantities used in the State. Politicians flatter themselves and the farmers that millions of wealth are created by our exports of agricultural productions, but would it not be better to pile up billions by keeping certain products at home?

Dairy Schools in England.

England is about to enter into a new era in her agricultural history. After a protracted discussion with regard to the introduction of Agricultural Education, final measures have been adopted in the establishment of dairy schools. The system is not a new one, dairy schools having existed on the continent for half a century, and it is not therefore probable that the scheme will prove a failure.

In response to a scheme submitted by Mr. H. M. Jenkins, Secretary and Editor of the Royal Agricultural Society, Lord Vernon and Lord Fitzhardinge have consented to allow their dairies to be utilized for the practical and the technical education of pupils who enter under stipulated conditions. Lord Fitzhardinge and Dr. Bond will organize the Gloucestershire school, and Mr. Jenkins will at the outset devote his energies to the organization and conduct of Lord Vernon's school, situated at Sudbury. The first session will commence on August 15. Instructions will be given in milking, skimming and butter-making; also in the manufacture of whole-milk, skim-milk, and cream-cheese, as well as in dairy records. "Practice with Science" is the platform laid before the country, upon which the promoter of the schools hope to win the sympathy and support of the farmers.

Well-recommended males and females who have completed their eighteenth year are eligible for admission into the Sudbury school. The pupils will be compelled to work at the various dairy operations as diligently as paid servants. The practice of the best methods, both by hand and machinery, will be explained during the course of operations, and special lectures on the principles of the various branches will be delivered as occasion demands. A complete course of instructions will embrace three months, but pupils may enter for a longer or a shorter period by special arrangement. Fees for instruction will be £3 for the first month; £2 for the second, and £1 for the third. Board money is required to be paid in advance, 10s. per week for females, and 12s. for males. Certificates will be granted to those who pass satisfactory examinations.

Prof. Heath, in the American Dairyman, thus tells how to determine when a cow is in calf: Let a drop of fresh milk fall in a glass of water. If the milk properly disseminates itself through the water the cow that yielded that milk is not with calf, but if it sinks to the bottom of the glass as it falls upon the water, and produces but little of the milky cloud, the cow is pregnant. The specific gravity and viscosity of the albuminous milk being heavier than water, thus retains the drop of milk and causes it to sink.

The farmer's ideas of his business are beginning to enlarge. The question he used to ask himself was, How much money can I get for this steer? It wasn't asked how much it cost to produce; in fact he thought it cost him nothing; summer pasture on the road side was nothing, and as the animal had to shift for itself, the labor was nothing. Now the advanced farmer asks himself, How much beef, butter, and cheese can I get from an acre? If he takes care of the stock and the acres the dollars will shift for themselves.

The Second Crop.

It is a mistake to suppose that land recuperates by leaving it in bare stubble during the autumn months. We usually have a spell of hot weather after the cereal crops are harvested, and this is the time when more fertility is usually lost than at any period during the growth of the crop. When the weather is warm a fertilizing class of salts called nitrates is formed from the organic matter in the soil, and unless a crop is on the land these salts will be washed away in the drainage water. If a plentiful crop of grass or weeds spring up this loss will, to a large extent, be averted, and the soil will be protected from the scorching rays of the sun, but the injurious effects of the weeds on the succeeding crop necessitates their destruction at the earliest possible moment after the removal of the crop. These facts prove the advantage of late-growing crops, such as roots, which have their longest period of growth after other crops are taken off. This end can only be attained on stubble land by the raising of second crops, such as winter rye, millet, etc.

Millet rotates well after early oats; and, in a favorable season, will be sufficiently mature for cutting in six or seven weeks, after which, under the best system of farming, fall wheat may be sown. But the farmer says that the season is usually too dry, and that millet is an exhaustive crop. Both of these objections are arguments on the other side of the question; if the season is hot or dry so much greater is the necessity for soil protection, and an exhaustive crop is invariably more profitable than a crop that is easy on the soil, there being little nutriment in a crop that takes little fertility out of the soil.

Of course in such a case the soil needs liberal manuring, but this is another source of profit. The sowing of millet would be a risky adventure if the mere value of the crop as fodder is taken into consideration. If the crop is a failure so far as its usefulness for fodder is concerned, there still remains a gain; for in addition to its value as a soil protector, the grass may be eaten off by the stock or plowed under as green manuring.

Most farmers must have already found out that, with the present high prices of land in Ontario, it does not pay to depend upon grazing alone as a means of producing the best dairying or beefing results in summer. It is not advisable to make a sudden leap from the pasturing to soiling, but a compromise should first be made, that is the retaining of a pasture, say one or two acres for each animal, making up the deficiency of grass by soiling. Now is the time to take this question into consideration for next summer. Winter rye should be sown before the fall wheat, but in case of a push of work it may be sown after. It may be eaten off by the stock in late autumn or early spring. During the following summer it may be cut early for soiling at intervals of three or four weeks, or may be plowed under in spring as green manuring, and any other crop sown on the land. Some farmers have tried winter rye with unsatisfactory results, because they have fed it exclusively to the stock. The failure was due to a lack of the knowledge of feeding. Rye contains an excess of fat-forming substances, and consequently cannot safely be

fed alone for any considerable length of time. In spring it may be fed for a few weeks until the clover comes in, rye and clover making an excellent ration for all kinds of stock. Farmers who will give this question careful thought and trial will soon find that the objection of "no time" is very weak, so long as help can be procured.

Winter Wheat.

Which is the best variety to sow? is now the question. Sow the variety that is answering best in your locality, on land of similar quality to your own. On light, sandy, or early maturing lands, the white varieties, such as the Clawson, and even the Diehl wheat, have advantages, and are yielding well; but on the heavy clay, or later maturing lands, the Scott and Democrat appear to give better satisfaction than the white wheats, and answer as well on the light lands.

The midge appears to be increasing in its ravages, and seems to be pretty general over the western part of Ontario, and has done considerable damage to some fields. Some varieties appear to have suffered from its ravages more than others. The variety known as the Michigan Amber, which had grown into great favor in many localities, and was thought to have been tolerably exempt from its attacks, has suffered very severely this year. This wheat is known in different parts of Canada under different names: for instance, it is called Egyptian in some places, in others the Reliable, but we believe it was first introduced as the Michigan Amber. The Democrat appears to withstand the attacks of the midge the best of any variety we have examined. We have seen many pieces in different counties, but our principal observations have been in the townships nearest to our office. The test field of Pearce, Weld & Co. furnishes a valuable guide. They have a very large variety of new wheats sown in blocks, which give an excellent opportunity for seeing the natures of the different kinds. The land on which they have their tests is a loamy clay, having a stiff clay subsoil. Their fall wheats were sown rather late. Every variety of wheat was more or less rusted, some were damaged much more by the midge than others. The three best varieties in the experimental plot of fourteen, which they say are the newest sorts, were the Democrat, Martin's Amber and Landreth.

The Democrat is now well tried, and we feel that we did a good service when we went into Ohio and purchased that wheat. We believe every one who procured our four ounce packages of that wheat and took care of it, has been amply rewarded, and the gain to the country from its introduction has been and must be something enormous. There is no wheat that we can commend to you in stronger terms for sowing this fall, on either clay or sandy soils. The Scott wheat we also look upon as one of our children; in some respects it has its advantages. These two varieties on strong wheat land we consider have yielded the best during the past year, and we believe we are right in commending them to those who are undecided which variety to sow. Those who wish to raise a whiter wheat, and have land suitable for the

growth of the Diehl and Clawson varieties, we would not advise to abandon the white wheats. Even the old hardy Mediterranean wheat is still doing good service, and for hardiness is not easily surpassed; in some localities it is still preferred. The new Hybrid Mediterranean appears to be a wheat of promise. It is our opinion that some of the old varieties that have gone out of use will come to the front again, perhaps under some new name, and will be again in demand. Our wheats appear to require a constant change, as it is only for a few years that any variety appears to stand the tests. Why we should need such a constant change in Canada is remarkable, as the same wheats continue to be sown in Europe perhaps for a century without diminution in yield or quality; with us it is strange how soon varieties run out or degenerate. We might say—our fathers, where are they? Or our old wheats, or old potatoes, where are they?

There never have been any wheats equal to the old Soules and old Blue Stem we used to grow forty years ago, and no potatoes better than the old Pink Eye that used to be grown at that time. Where are they? The young farmers of the present day may ridicule these remarks if they choose, but the old farmers of Canada will bear us out in our assertion.

Of the new wheats recently introduced, the Martin's Amber appears to be the most promising. Although not quite as early as the Democrat or Clawson, we feel confident in recommending it for trial to all, and on early wheat land we think many will find it more profitable than either the Diehl or Clawson.

Do not think of wasting time and energy about testing all the varieties that are sent out. The seedsmen will do that, and have agents all over the world to procure the best. Canadian, American, English and German seedsmen are at that business. When any variety has been brought out by either hybridizing or importing, tested and commended by reliable men, then we deem it our duty to call your attention to it, more particularly so when we have seen it growing. The Martin's Amber has passed through the ordeal, and can now be commended for more general use. We have seen several fields of it, and each looked remarkably well on both heavy clay and light soils, and is the most promising of the new varieties. Still we do not know that it will excel the Democrat or the Scott wheats.

We took a trip through Markham, Pickering and Whitby, calling on many of the leading farmers, of which we intend to write in future issues. We also called at Mr. W. Rennie's seed farm, in Markham, of which we also intend to make remarks in a future number. In regard to the winter wheats, we find the Democrat and Scott varieties in favor through these townships; but on Mr. Rennie's farm, among his numerous test varieties, we see the Valley wheat, which appears a highly commendable variety. It has not yet been grown in any quantity in Canada. Mr. Rennie considers the Bonnel, also called Landreth, the Valley and the Martin's Amber the three best varieties to sow this fall.

How to save elbow grease—Keep your tools sharp and free from rust.

Special Contributors.

A Chatty Letter from the States.

[FROM OUR CHICAGO CORRESPONDENT.]

The agitation at the Chicago stock yards concerning the sale of pregnant animals for food, particularly sows, has become somewhat exciting. For years it has been the custom for buyers to take such hogs in a general load, paying one price for all, and deducting or "docking" 40 lbs. for the unmerchantable sows.

Abuses grew out of the system by the dockers hired by the packers arbitrarily demanding more dockage than they were entitled to. It is needless to explain all of the details, but suffice it to say that the abuse of the rule became very obnoxious and intolerable. The packers were virtually stealing by rule in broad daylight. The commission salesmen, at the demands of their country customers, resolved to abolish the rule entirely, and have all kinds of stock sold on its merits. The packers resisted stubbornly, and it will probably be some time before the affair is properly adjusted.

The question is, Should such stock be allowed to go into human consumption? What raiser of hogs would kill such stock to supply his own meat house?

Well known hog raisers say that it is next to impossible to get the most good in fattening hogs where there are "open" sows in the lot wanting to associate with the boar. This can be overcome by spaying the sows that are designed for market. An experienced hog raiser says he has found that in that operation he loses one hog in twenty, and that it does not pay. But we have heard of men who would spay whole herds and insure them for 10c. per head. This would pay, because at market a spayed sow is worth at least 25c. per cwt. more than an "open" one.

It is a fact that the operation of spaying is not very difficult, and is frequently performed in a few minutes by a man with a little experience and a good jack-knife. Spayed sows or spayed heifers fatten as well, and are as valuable at market, as barrows and bullocks.

Thin fleshed old sows are much easier to alter than fat or young hogs. Under these circumstances then a good policy to pursue would be to raise from one to three litters of pigs from each sow, then spay and fatten her for market. Pork packers say that if altered after having even five litters, they will fatten as well and look almost as trim as the smoothest barrow.

Effects of the Frost on Strawberry Blossoms.

BY W. W. HILBORN, ARKONA.

The past has been the most unfavorable season within my knowledge for strawberries. Last summer was so unfavorable to the growth of plants, the spring being so very dry, with a heavy frost on the morning of May 29th—four degrees of frost were registered after daylight—that it affected the blossoms of the various sorts about as follows:—

All berries set on and all blossoms open were killed on all varieties.

WILSON'S ALBANY, about one half out in blossom; many killed which were not open.

CRESCENT SEEDLING, about one-fourth out; not many killed not out; plenty of blossoms left for a crop. Very promising.

KENTUCKY AND CAPT. JACK, not many out, but few hurt not out.

MAGGIE AND ALPHA, more than half out, not many hurt not out.

ARNOLD'S PRIDE, BRIGHT IDA, AND SHARPLESS, one half out; a great number hurt not out; foliage also hurt to some extent.

CINDERELLA, BIDWELL, MINER'S PROLIFIC AND NEW DOMINION, about one-third out, not many hurt not out.

PIPPER'S SEEDLING, about one-third out; quite a number hurt not out; plenty fruit buds left for a crop.

SENECA QUEEN, one half out; not many hurt not out; enough buds left for a crop.

GOLD DEFIANCE AND MT. VERNON, just beginning to open; quite a number hurt not out; enough left for a crop.

EARLY CANADA, out most of any, perhaps two-thirds open; not many hurt not open; this is a very promising early sort.

DANIEL BOONE, MANCHESTER AND JAMES VICK, just beginning to open; not hurt to any extent. These appear to be safest against late spring frosts of any of the varieties thus far tested.

JERSEY QUEEN, none out; a great number killed not out; fruit buds most tender of any variety.

MRS. GARFIELD, just beginning to open; quite a number killed not open.

It is not often we have a frost so late that is heavy enough to do so much harm, but it is safest to plant such varieties as Crescent Seedling, Daniel Boone, Manchester, James Vick and Capt. Jack; for large plantations they will give the best satisfaction of the many varieties we have tested.

Garden and Orchard.

The Art of Budding.

BY HORTUS.

Budding, as it is termed, is a simple and expeditious method of propagating all kinds of fruit and ornamental trees, roses, etc. It is an art so easily learned that no farmer or fruit grower should be without knowing it, and be able to practice it successfully. The month of August is the best time for the operation, as at this season of the year the sap of the tree rapidly callouses and heals over.

The budding knife, which is made for the purpose, can be procured at the hardware stores or from seedsmen. Having provided himself with one and a pruning knife to do the strong cutting, the budder commences to get his cions. These should be of this season's growth and should be selected carefully, as a great part of the success lies in having good cions. They should be selected neither too soft nor too hard, or in other words, neither too green nor too ripe. The proper state may be known by cutting off a few buds and removing the wood from the bark neatly and without tearing the inner bark or disturbing the eye of the bud. If the wood comes away freely from the bark the buds are in a good condition, but should the wood not come out without tearing the bark the cion is too ripe for use. Remove the leaves of the cions as soon as cut, for if left on too long they soon evaporate the sap in the cion and will destroy the buds. Cut the leaves off, leaving half an inch of the stem to protect the bud and to serve as a catch by which the budder, when inserting the bud, can push it in with the end of the handle of his knife. When the cions are gathered and

trimmed, they should be placed in damp moss and away from the air. In this medium they will keep for weeks fresh and good and fit for budding. For tying use any medium strength of twine, such as No. 8 Carpetwarp or Bassmat.

The budder is now ready to commence, having previously got his knife properly sharpened. It is necessary to keep your knife with a keen edge, as the cuts and slits should be made clean and neat. There are many different methods of budding which people practice,

but the best one is to make two cuts on the bark the shape of a T, one cut crosswise or lateral on the stock or branch, then one lengthwise, about an inch in length. With the sharpened end of the knife-handle carefully pry up the corner edges of the bark, slipping the end of the bud in, and gently push into place underneath the bark, being very careful not to bruise or touch the little bud, but press underneath the axil of the leaf-stalk when pressing the bud into place. In cutting buds off the cion the budder holds the cion from him, the thickest part, or where the cion was cut from the tree, outwards, and cuts the buds towards him. A little practice will soon teach the budder how to remove them neatly and quickly. A bud when cut off should be not less than one inch in length, having the eye of the bud proper in the centre. It should be cut evenly, and the cut may be made in depth to about a third of the whole thickness of the cion. Tying is very important and on this rests the principal success of budding. Commence the string by crossing it evenly around the base of the cut on the stock below the bud, and wind it around evenly and upward, making sure to hold it firmly without slacking when twisting it around. See that it is close and firmly by the eye of bud, but not covering it. Carry it up to the top of cut and tie it firmly. The bark of the stock should also part easily from the wood for the budding to be successful, for if the bark will not come away easily, but tears and drags, it is useless to try to do any budding there. After the buds are in and tied, no further care is required for a few weeks, when the strings may be removed. If the stocks are not growing the strings may be left on for a longer period, but if they are the strings must be taken off or they will strangle the buds.

Plums should be budded first, then cherries, next apples and pears in the order named. Flowering chestnuts, elm, ashes, lilacs, and all kinds of ornamental trees are propagated by this method. Trees that ripen up their growth early should be done first. Budding may be commenced in the latter part of June, and can be successfully practiced till October. By this interesting process of propagation, the horticulturist can amuse himself with profit by budding several varieties of fruit on one tree of the same species. By this means also new varieties of fruit may be tried, as they come sooner into bearing than by waiting to grow young trees. Cions may be sent anywhere by mail or express, provided they are properly packed. Roses are easily propagated by budding, and, in fact, this work is the most important now going on in all the nurseries. Many thousands of the most intelligent nursery hands all over the States and Canada are now busy with bent backs and skillful fingers inserting the delicate buds so diminutive and small that they can scarcely be seen, placed in position that in time will grow forth into the sturdy tree, whose rugged limbs and dividing branches bear bushels and barrels of luscious fruit. In the pursuit of gardening and horticulture there arises many interesting operations, but none more so or more useful and instructive than that of budding.

Garden Hints for August.

The farmer cannot grow too great a variety of vegetables, if he has regard for his health or his propensity for luxury, and he should take the advantage of every odd moment in developing the resources of his garden. His aim should be not only to have a great variety of vegetables, but to preserve them fresh for every season of the year. This is an important month for the consideration and application of this question.

SPINACH.

This plant is cultivated for spring and winter greens. It is a profitable market crop, and should be in every farmer's garden. It needs a deep, rich, well-drained and well-pulverized soil, if the best results are desired to be attained. It may be planted on land from which a summer crop has been taken. Mark out the ground in rows one foot apart. In September or October hoe the plants and thin out in places where they stand too thick. What is required for family consumption should be mulched with salt hay, which will protect the leaves from injury by frost.

CORN SALAD.

This plant, also called feticus, or lamb's quarter, is an early spring salad, and is cultivated just like spinach. It should be sown towards the latter part of August or early in September in drills one foot apart and half an inch deep. Take off the mulch in spring and the salad will make dainty dishes for April and May. Good seed may be obtained by leaving a few plants to grow till ripe.

RADISHES.

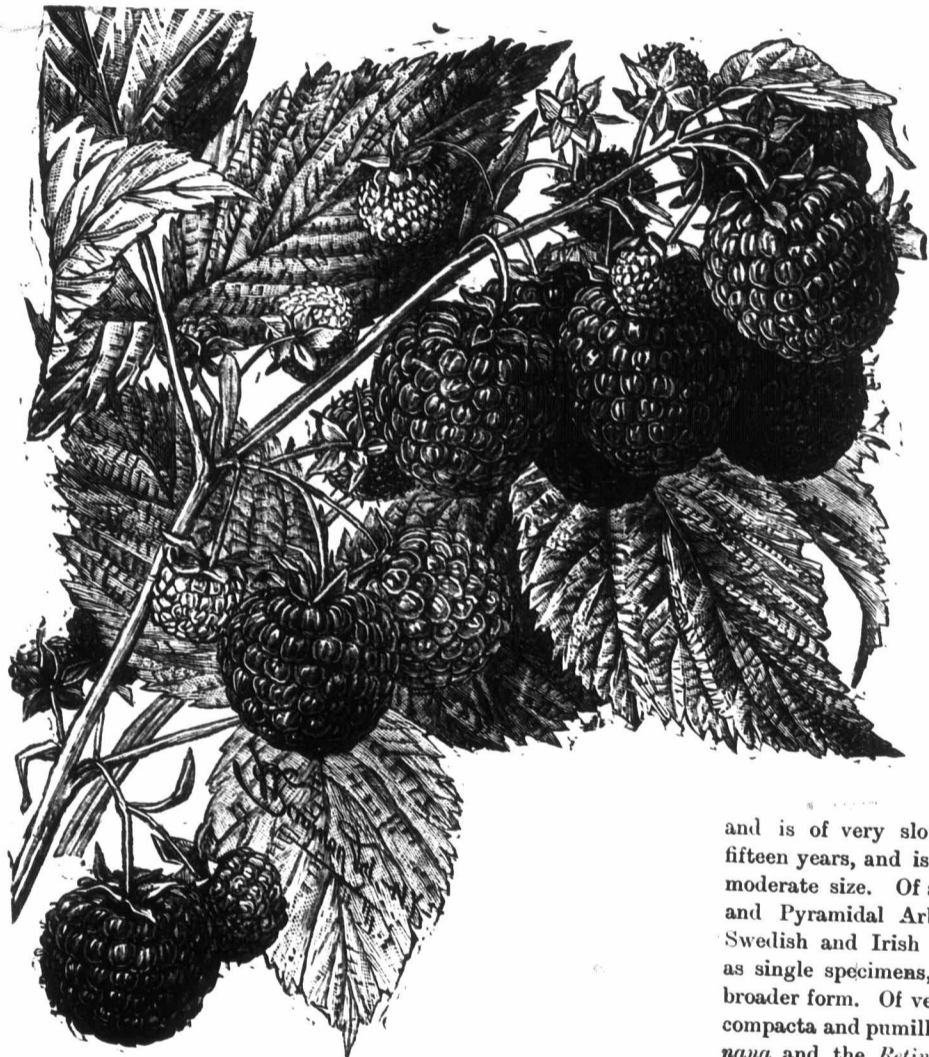
The Black Spanish is large sized, and is grown for winter use. The seed should be sown as early as possible in August. The roots are pitted in the fall like turnips or carrots.

LETTUCE.

This is a very wholesome vegetable for spring and summer salad. The seed may be sown late in August, and up to near the middle of September. The cabbage or head sorts are extensively cultivated. About the middle of October the plants may be transplanted into cold frames. In cold weather the beds are covered with sashes, removing them when the weather is mild. For plants kept for family use a rough structure of boards may be used for winter protection, or if the seed is sown in a sheltered spot and well mulched, the plants will keep fresh till spring, when they may be transplanted.

The Marlboro Raspberry.

Messrs. Caywood & Son, of Marlboro, Ulster Co., N. Y., the originators of this splendid berry, say the Marlboro is a cross of the last one of a long train of our own seedlings and the Highland Hardy. These seedlings were started from the old English "Globe" and the Hudson River Antwerp over thirty years ago. The Marlboro is the sixth generation. From the wild appearance of the bush and its unusual sized foliage, which does not burn or curl, and having grown it on stiff clay and on very dry gravel, we are confident it will succeed as well in any section of the country as it does here, and, from its unequalled growth, that it will get large enough on ordinary farming land.



THE MARLBORO RASPBERRY.

It is the largest grower, with stronger canes and side arms, than any known variety. After being tied to the stakes all winter, having no protection, the branches from the terminal buds, at the height of eleven feet, have borne as fine fruit as any other down the cane. It is hardy in the fullest sense here, with thermometer 20° below, the side branches are two to three feet long, with clusters occurring on short joints more than half way down, and are of unusual strength, bending with a heavy load and not breaking. The size of its dark green foliage is one of the means of its early, regular, and late bearing, and extraordinary size of fruit, which is one-quarter larger than the old Hudson River Antwerp, and we venture to say,

any other variety known to the public. The berries average three-quarters of an inch in diameter, and when not retarded by long and severe drought, one-third of them will measure an inch. (We now have berries preserved in alcohol which are one and one-eighth inches in diameter.) In color, a bright scarlet. The above has been seen by scores of persons.

It does not contain the peculiar musky aroma of the Antwerp, but is passed upon by all as delicious in flavor. It excels in firmness—numbers of berry-boxes of the fruit have been sent through the mails long distances, very few of which were injured. We claim the Marlboro to be the earliest berry now known.

The Antwerp has returned \$1000 per acre, and old growers estimate the Marlboro much

higher, and now at a time when there is no other raspberry before the country that will fill the void made by the loss of the Antwerp; and it is known that a red raspberry, with requisite qualities, will yield a greater profit from a given quantity of land than any other fruit, and as every point we have given above can be verified by hundreds of visitors from this berry section and also from abroad, Antwerp growers here are justified in their ready remarks that it is the "best variety" they ever knew.

Evergreens for Small Lawns.

The Cembrian pine is one of the most beautiful evergreens, and is of very slow growth during the first fifteen years, and is well adapted to places of moderate size. Of smaller trees, the Siberian and Pyramidal Arbor Vitae, as well as the Swedish and Irish Juniper, should be planted as single specimens, or grouped with trees of broader form. Of very small trees, the Parson's compacta and pumilla Arbor Vitae, the *Succisa nana* and the *Retinospora plumosa aurea* are all desirable.

TREE PLANTING.—The St. Mary's *Argus* says:—For years the Council of this town has given 37½ cents for every tree planted, and as the result of this public-spirited policy, the town has become a perfect arbor, almost every street being lined with beech, maple, chestnut, and other handsome trees, which are very attractive to visitors and are the pride and glory of the denizens.

Those who are fond of wholesome vegetables should not neglect their garden now.

If you want to grow a great variety of vegetables, you should have one spot of your farm or garden thoroughly drained and well tilled and manured.

Grape Culture.

BY D. E. SMITH, WINONA, ONT.
(Concluded.)

The following spring, as soon as ground is in condition, harrow or cultivate, mark out cross-wise the desired distance apart and then throw open a double furrow down the centre of the land as deep as possible, being careful to have the last furrow perfectly straight. Now, with a man to go ahead leveling up the bottom of the furrow so that the roots will be about six inches below the level of the ground when flat, a small boy to drop the plants, an expert planter to follow, spreading out the roots as much as possible and covering with fine earth drawn from either side with the hand, and another man behind to fill up with a hoe, 2,000 vines can be planted in a day. The plow should not be far ahead of the planters and the roots kept wet, and not one in a thousand should fail to grow.

Roots should now be drilled between the rows and cabbage or tomatoes planted between the vines in the row. Corn creates too much shade. Grape vines want plenty of sun. Cultivate thoroughly, as the first year's growth is most important. Ridge up in the fall if the ridge has been worked down by cultivation; if not it will be all the better not to plow. The second season plow down the ridge in the spring and fork up the narrow strip along the row; some other kind of roots should be grown the second season between the rows. The ground is ridged in the fall and thereafter no crop is grown between the rows. The cultivation I pursue after this is as follows: Plow down in the spring, fork up the row, harrow down, and after press of spring work is over throw back with gangplow and hoe the row, harrow down, and then cultivate and hoe every two weeks until 1st of August, when all cultivation ceases in order to allow the wood to ripen. As soon as fruit is gathered ridge up for the last time that year.

We lack a proper two horse cultivator yet. I wish some inventive genius would get one out. It should be able, in addition to the requirements of a good field cultivator, to cultivate close to the row, that is, have teeth outside the wheel.

As to distance apart to plant, there is much diversity of opinion, depending partly upon the variety of grape, partly on the soil, but largely also because the arguments pro and con are purely theoretical, not based upon any experience at all. I am not yet fully satisfied as to the most profitable distance to plant, but have decided upon a few points. First, plant the rows hereafter 11 or 12 feet apart, as that distance costs no more for cultivation than a lesser distance, and I find the roots fill all the ground at 12 feet apart. The reason it costs no more to cultivate is that the same number of rounds with gangplow, harrow or cultivator answers for this distance as for a less one. In the row the short-jointed, heavy loaders like the Delaware or Iona, require on my clay loam only five or six feet of trellis, whereas Roy, 3 and 6, and other kinds that are strong growers and that set but few berries on a stem, and consequently require all the wood procurable to guarantee a crop, require 12 feet, Concord will do with 8 very well. But the question is not one of trellis room, but whether

a given row planted close and pruned close will produce more or less fruit of a given quality, or of better or worse quality of a given quantity than one planted further apart. If it can be shown that the former will give the best results, as I am inclined to believe, then it would be advisable to plant close, even if the difference were slight, as the cost of cultivation, posts, wire, etc., are just the same in the one case as the other, the only difference being in the first cost of vines, which is very trifling. On sandy land vines require more trellis room than on heavy land, hence in part the diversity of opinion.

As to varieties to plant for profit, under ordinary circumstances the Concord comes first with no other kind second. But experienced growers with a favorable locality and soil, often make other kinds more profitable. For instance, if a grower has a piece of land very dry and warm, and knows that he can get early kinds ripe before the main crop of grapes comes in, he would make more money by planting Moore's Early, Worden, Leady, Red Wyoming Roy 3 or 9, or other early kinds, although none of them, unless it be the Worden, will yield with the Concord. The Worden very much resembles the Concord, except that it is a few days earlier. Again, if well manured and protected from winter either by the locality or artificially, the Delaware and many of the Roy varieties will yield larger profits than Concord, for there are many kinds that will load as heavy as that veteran grape, but cannot endure rough usage, as it can. Then again, if there is any spot in Canada where Catawbas or Ionas ripen successfully, they will pay better than Concord. During a large portion of the year the only grapes exposed for sale are foreign grapes. This is not as it should be; we should have grapes to supply the place of the interlopers. It is promised in some of the newer kinds, but whether the promise will be realized remains to be seen. The aspirant making the loudest professions is the Niagara, a fine white grape, equalling the foreign variety in flavor and appearance, and said to be as prolific and as hardy, and in fact to possess all the good qualities of the Concord, and in addition to be as good a packer and keeper as the foreign kinds sold here in the winter. But I doubt it; I have yet to see the grape grown here that will pack and keep with them and be of first-class quality, but believe we will yet get such a grape here.

PRUNING.

The puning of vines is a great bugbear to those not initiated, but it is a very simple matter. Every fully developed bud on a Concord vine should produce a pound of grapes under favorable conditions; all that is required then is a knowledge of about how much a vine should bear, always keeping in mind that it is last year's wood that produces the crop this year, and that the less old wood the vine has to support the better. When planted out the vine should be cut back to two buds, one of them to be rubbed off after first cultivation. The second year the same as the first, the growth of new wood being tied to a stake in an upright position. The third year posts should be set and a wire stretched about 20 inches from the ground and the cane cut off to reach this wire, having four to six buds generally.

This should produce three pounds per vine; after this there are many systems of pruning. One, called the Kniffen system, lately introduced, is as follows: Only two wires are used, the bottom one about 2½ feet from the ground, the other about 5 feet. The third spring the cane is brought up to the bottom wire. The fourth spring two laterals are extended along the bottom wire, one on each side of the main stem, and each having from four to six buds more or less, according to the strength of the vine. The following spring these are renewed by a shoot from or near where the side arm springs from the upright cane, and this renewal is cut back to about a half dozen buds, but in addition to this the upright stem is extended to the top wire. The next or sixth spring from planting, the vine being full grown, laterals are extended along the top wire the same as the bottom, and thereafter the pruning consists in simply renewing these four side arms, cutting each to five or eight buds, according to the strength of the vine. The advantage claimed for this system is that the grapes and young shoots hang down free from the wire, allowing a free circulation of air and greater ease in picking the fruit, besides saving wire.

Another system nearly the reverse of this consists in having three or four wires and running out arms along the lower wire to remain permanently, and from these arms to train up a sufficient number of shoots to the next wire above to produce a crop, the new growth from these having the balance of the trellis above to run on. These upright arms are cut off each year and new ones substituted.

Another system still more simple is to extend arms fan shaped over the trellis; gradually, as the vine grows in strength with years so that when full grown there are five arms, one of these is cut off and renewed by a young cane every year, and the laterals from the remaining four old canes are cut back to one bud. This is the simplest method I know of, and can be learned in ten minutes by a new hand.

But the system most in vogue here is more complicated, because it is no regular system at all, but a mixture of the three last. Arms are extended fan shaped over the trellis, but new wood is used whenever procurable and all old wood cut out that is possible. To do this to the best advantage requires a knowledge of what is necessary to produce the greatest amount of fruit the vine is capable of bearing without injury, which can only be acquired by experience.

GATHERING.

In gathering the fruit care should be taken to mash no berries. The expressmen will do that for you and charge nothing additional. Pack in half bushel baskets as closely as possible and cover with wooden cover fastened down by wire across both ends, the wire being punched through the cover, and around the rim of the basket and fastened to itself on top. Then send to some reliable commission house with your name plainly stamped on the cover. If your fruit is good those who buy once will buy again, your name on the cover being a guarantee for good fruit.

The proceeds of an acre of Concord varies from nothing to \$100, according to locality, soil, cultivation and a hundred other things that can best be learned by experience. The cost of rearing a vineyard to full growth also varies from \$100 to \$200 per acre. The annual cost of the vineyard should be in the neighborhood of \$50 per acre.

Prince of Berries.

The accompanying cut conveys a good idea of this new claimant for popularity. Mr. E. W. Durand, its originator, considers it the best of the many new varieties raised by him. The following is Mr. Durand's description:—

"Superior to any berry known in flavor or quality, brilliant and beautiful in color, abundant in bearing, large size, texture exceedingly fine and melting, no hard or unripe spots or tips, coloring evenly and perfectly, unsurpassed as a carrier and keeper, invariably perfecting its large crop of fruit, desirable in form, perfect in blossom, never scalds either in foliage or fruit, remains a long time on the vine without injury, a vigorous and luxuriant grower, a superb plant, and a reliable fertilizer for all late pistillate varieties, the very best as an accompaniment to the Jersey Queen, possessing such determined, hardy qualities as will undoubtedly make it a success in all sections under the variations of soil, climate, etc., etc. The Prince of Berries being one of the very latest, generally escapes the late frost, so fatal to the early varieties, affording protection by its heavy, stocky foliage."

Packing Apples

The fruit growers of Nova Scotia have shown skill and success in packing apples for market, and one of the best orchardists of that country has given, in substance, the following account of his management:—

He takes the barrels under the trees for convenience, carefully picks and places the fruit in the barrels without assorting, and when full, heads with pressure. They are then wheeled to the fruit house, where they remain till time for shipment. The barrels are then emptied on a large and broad table, two at a time. The assorting can be better made on this table than in any other way, and the good or perfect fruit is separated into two classes, marked as "choice" and "medium." When

the barrels are filled, the head is not set in at once, but with a cushion-head, which will play loosely in the barrel, and which has been properly lined; considerable pressure is given without injuring the apples, bringing them more closely together throughout the barrel. The false head is then removed, and the permanent head applied with sufficient pressure to hold them solidly together without rattling. For the best

Montreal Horticultural Society.

A meeting of the directors of this Society was lately held in Montreal. It was then decided that the horticultural show would take place on Tuesday, Wednesday and Thursday, 9th, 10th and 11th September. A good many changes have been made in the prize list this year. The premiums offered are liberal, and embrace flowers, fruits, vegetables and honey. Nearly 100 sections are devoted to prizes exclusively for amateurs, and all prizes offered are also open to them. The society is in treaty with parties in Boston and Montreal for the supplying of large tents in which to hold the show. They could be placed more on the line of persons visiting the Dominion Exhibition held at the same time, the Victoria Rink, where it has been customary to hold the show, being somewhat out of the way and difficult to find by many of the strangers visiting the city.

Ashes for Orchards.

A correspondent of the New England Farmer says that a New York farmer observed that some of his apple trees, that had been dressed with unleached wood ashes, bore apples which kept all winter without rotting, while the rest of the fruit rotted badly. His trees were infested with apple tree blight. He finally applied wood ashes, at the rate of two hundred bushels to the acre, to his orchard, and washed the bodies of the trees with lye. The

orchard recovered from the blight, and the apples would then keep well in an ordinary cellar all winter.

SIR,—I take ten agricultural papers, Canadian and American, and I can positively assert that the *ADVOCATE* is by far the best of the lot. It is exactly the thing that the practical farmer wants; it gives him all the information he needs just in the season when it is required.

ARKONA, Ont.

W. W. H.



PRINCE OF BERRIES STRAWBERRY.

success, each barrel is to be marked with the owner's name in full, as a guarantee of the excellence and uniformity of the package throughout. When that name becomes known to purchasers, he will have no difficulty in selling at good prices, even in abundant years.—[Country Gentleman.

Germany expends \$30,000 annually for the maintenance of experimental forest stations.

The Farm.

Test of Fourteen Varieties of Winter Wheats.

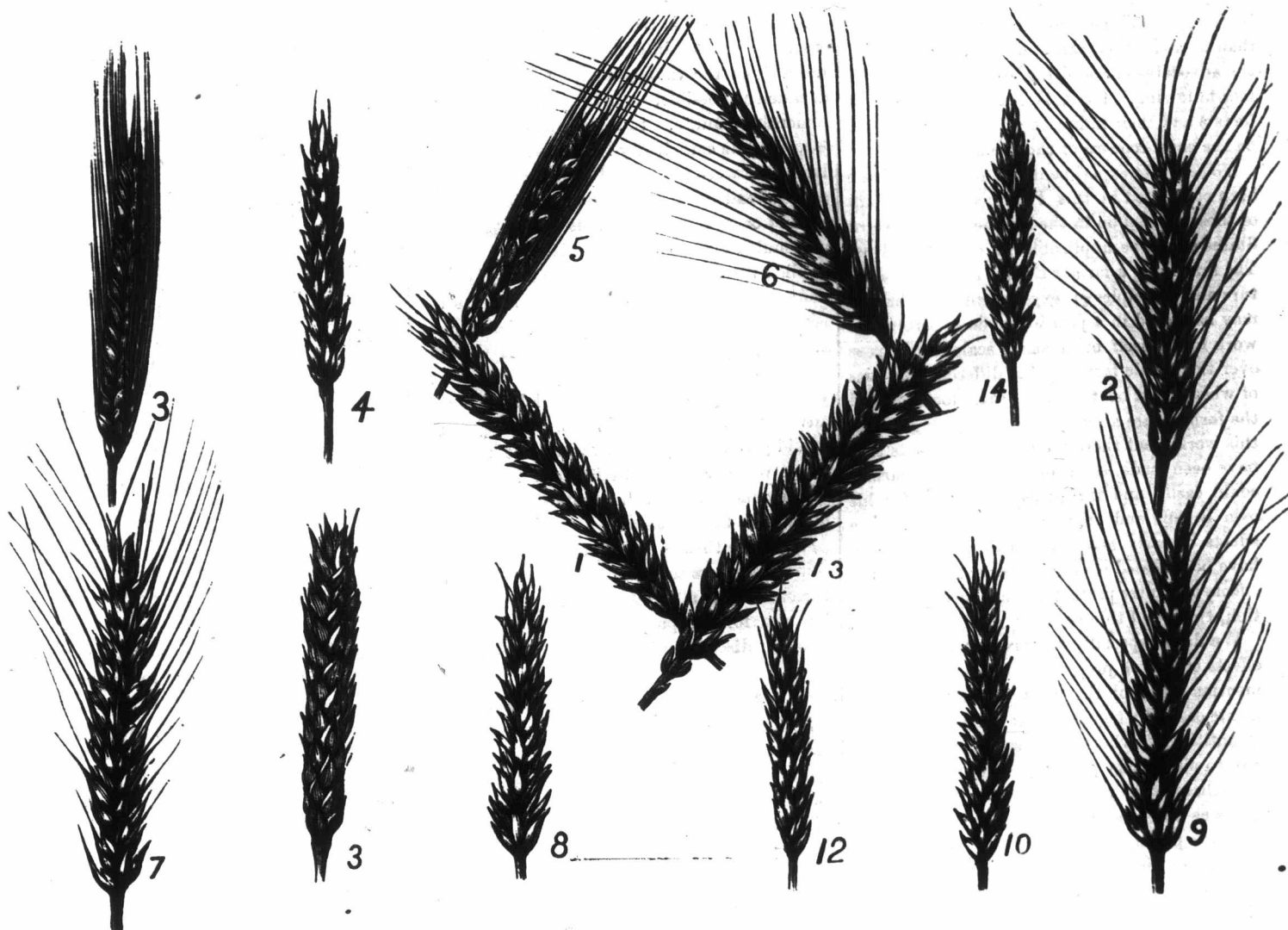
These varieties were sown in the following order on the 21st of Sept. :—Martin Amber, Democrat, Golden Grain, White Mountain, Hybrid Mediterranean, Red Rock, Tuscan Island Roger, Egyptian, Scott, New Golden Prolific, Delaware Amber, Landreth or Bonnell, and Dot.

The ground was a sandy loam, hard clay bottom, with northern aspect, well summer-fal-

- even; stands up well; nearly free of rust. No. 2. Democrat—White chaff, bearded; bright, clean straw; also nearly free from rust No. 3. Golden Grain—Bald; white chaff. No. 3 in left hand corner is one of a number of heads found growing among Golden Grain. No. 4. White Mountain—White chaff; bald head; very stiff straw. No. 5. Hybrid Mediterranean—Red chaff; bearded; heads short but very closely set; stiff straw. No. 6. Red Rock—White chaff; bearded; open head. No. 7. Tuscan Island—Very similar to No. 6.

Naming Cattle by their Blood.

Owing to a confusion of expressions relating to the various degrees of relationship existing between animals of mixed blood and their ancestry, stock breeders have found it necessary to define the terms used. "Pure bred," "thorough-bred," and "full-blood," are synonymous terms, indicating a distinct breed without admixture of foreign blood. A "cross-bred animal is the offspring of two pure-bred animals, as a Shorthorn bull and a Devon cow, or vice-versa. A "grade" is the offspring of a pure-bred male and a "native" or any other cow of impure blood. If this is reversed, as



THE LEADING AND LATEST VARIETIES OF WINTER WHEATS—FROM PEARCE, WELD & CO'S. FALL WHEAT CATALOGUE

lowed, but no manure. Each variety was drilled in side by side. During the fall, and up to the time the snow went off, there was very little difference in the appearance. But in April the appearance of many began to change, and the Martin Amber, Democrat, Hybrid Mediterranean and Landreth began to stand out very prominent over the others. Martin Amber looking especially well. These 14 varieties are very distinct, and the difference is very perceptible, with the exception of the Tuscan Island and Red Rock, which appear very similar, both in growth and sample of grain.

The following is a brief description of each: No. 1. Martin Amber—White chaff, bald head, fine, long, close, well set head; very

- No. 8. Roger—White chaff; bald; rather late; heads short. No. 9. Egyptian, Michigan Amber or Reliable—White chaff; bearded. No. 10. Scott—This wheat is too well known to need any description. No. 11. New Golden Prolific—Not worth illustrating. No. 12. Delaware Amber—White chaff; bald; very poor, thin head. No. 13. Landreth or Bonnell—White chaff; bald; a fine head; good straw, and pretty tall; looks as though it would be very heavy straw on strong land. No. 14. Dot—White chaff; bald head; very small, slim head. The heads represented in the engraving are only one-third the natural size.

the offspring of a native bull and a pure-bred cow, the animal is then said to be "mixed bred." This term is also applied to the offspring of impure blood of the same breed. When sire and dam are both of impure blood of mixed breeds, the offspring is a "mongrel." A grade in which the pure-bred blood greatly predominates is a "high grade."

It is stated in French agricultural journals that French cheese makers are not satisfied unless they get from \$150 to \$200 per annum from each cow. This is owing to their expertness and thoroughness in the manufacture of cheese, and each particular agricultural district of France has attained a celebrity for the making of some particular variety of cheese, developing into a special and important industry.

tural Society. ... of this Society ... It was then de ... al show would take ... day and Thursday, ... ber. A good many ... n the prize list this ... offered are liberal, ... its, vegetables and ... honey. Nearly 100 ... sections are devoted ... to prizes exclusively ... for amateurs, and all ... prizes offered are ... also open to them. ... The society is in ... treaty with parties ... in Boston and Mon ... real for the supply ... ng of large tents in ... which to hold the ... show. They could ... be placed more on ... the line of persons ... visiting the Do ... minion Exhibition ... held at the same ... time, the Victoria ... rink, where it has ... been customary to ... hold the show, being ... somewhat out of the ... way and difficult to ... nd by many of the ... rangers visiting ... e city.

Orchards.

A correspondent ... the New England ... rmer says that a ... ew York farmer ... served that some ... his apple trees, ... at had been ... eessed with un ... ched wood ashes, ... re apples which ... pt all winter with ... t rotting, while ... e rest of the fruit ... cted badly. His ... es were infested ... th apple tree ... ght. He finally ... plied wood ashes, ... the rate of two ... dred bushels to ... acre, to his or ... rd, and washed ... bodies of the ... es with lye. The ... ight, and the ap ... n ordinary cellar

papers, Canad ... positively assert ... e best of the lot. ... practical farmer ... information he ... is required. ... W. W. H.

Fall Wheat.

This being an age of experiments in all departments of husbandry, no farmer is longer safe in following the footsteps of his forefathers. This is especially the case in the cultivation of fall wheat; for the state of our soil and seasons are changing, and the crop is becoming more precarious every year. The farmer who wants the best stock must go where the best herds are kept; so also if he wishes to become a successful grain grower he must first ascertain where the most extensive and accurate experiments are conducted. Few experiments conducted in one country, or in one part of a country, will apply to another locality; but it is just here where the common sense of the farmer can be utilized. The fall wheat crop is more subservient to climatic irregularities than to any other cause, despite the logic of the advocates of manuring, draining, and summer-fallowing. For this reason the study of forests and their influence upon climate should be the chief concern of the farmer.

No accurate experiments in fall wheat have been conducted in this Province; but several of those carried on in the Northern and Eastern States would be applicable to our conditions. The first thing a farmer should learn is the nature and principles of experiments, so that he may be placed in a position to do experimental work for himself on a small scale. We pass over the simple fact that the different varieties of wheat must be tested in each locality, and the farmers are already extensively engaged in this work; but there are many other tests that have been made, some of which every farmer could easily and inexpensively repeat for his own benefit and that of his neighbors. The effects of early and late plowing and sowing have been tested over and over again; also the effects of winter protection and spring cultivation, thick and thin seeding, etc.

We desire specially to draw attention to the effects of winter protection, but we shall first mention a few of the most important experiments carefully conducted at the Ohio station. Quantities of wheat were sown varying from two to nine pecks per acre, and it was found that three pecks produced nearly the same returns as nine, the best yields coming from five to seven pecks per acre. Five pecks were sufficient on a rich soil with good seed, and seven for inferior soil with inferior seed. It was concluded that if all the conditions were at their best, three pecks per acre would have produced the best results. Harrowing fall wheat in spring was not attended with success, but this test must not be accepted as conclusive, for many farmers have found it beneficial on underdrained, baked land. With regard to time for sowing, the Ohio tests will not exactly apply to our conditions; but the experiments have solved the important fact that there is no particular date that is best for sowing. Various dates between Aug. 25 and Oct. 13 were chosen; but, as a rule, the best results came from the later dates, especially where the wheat was attacked by the Hessian fly. It was found that wheat on poor soil should be sown earlier than on rich and well prepared soil. The early and the late sown wheat ripened at the same time.

Early in December one plot was mulched with straw to the depth of two or three inches,

and it is reported that the crop was strong, healthy and even, and not injured by the winter, the straw also having protected the roots from the summer drouth. Here is a point worthy of the gravest consideration by our farmers. It is not necessary to use straw; barn-yard manure would do just as well, if not too rotten. If a plan could be devised for spreading the manure or straw without injury to the soil by the horses' feet and the wagon wheels, the mulch could be as effectually applied immediately after the sowing of the seed. Every farmer knows that the greatest damage is done in the spring, by the heaving of the wheat caused by alternate freezing and thawing. We are now on the track by which this calamity may be averted. The farmer should start as early as possible in the fall to put the manure from the stables into heaps, mixing the manures from the cattle, horses, sheep and pigs as much as possible, each heap containing say a month's manure. In a few months the first heap will be sufficiently fermented for the killing of the weed seeds, and may be drawn out and spread over the wheat on the frozen ground or on the snow. This will not only act as a mulch but also as a fertilizer, and can be applied with less loss of ammonia than if drawn and spread in the fall or spring. Besides the returns from the manure would be a year earlier than on the ordinary plan. If the land is poor part of the manure may be applied in the usual way, and part as a mulch. Another advantage could be gained by this plan; it would give employment all winter to men and teams when there is little work to be done, leaving more time to accomplish other work during the busy season.

We make these suggestions not only to encourage farmers to commence experiments for themselves on a small and inexpensive scale, but also for the purpose of opening up questions for discussion in the farmers' clubs.

Vitality of Weed Seeds.

Several important experiments have been conducted by Mr. S. T. Maynard, Professor of Botany and Horticulture, Mass. Agricultural College, with regard to the vitality of the seeds of various weeds. The experiments were undertaken in response to questions submitted by the Board of Control. The seeds tested were those of the dock, sorrel, daisy, and shepherd's purse, which were fed repeatedly to a horse, and the seeds from the excreta sown, having passed through the bowels of the animal. It was found that the seeds germinated readily when placed in the soil under favorable conditions as to heat and moisture.

Another experiment was tried with regard to the vitality of seeds when submitted to the heating action of the compost heap, and it was found that their vitality was destroyed when exposed to a temperature ranging between 90° and 110° Fahr. for from five to seven days in a moist compost heap. In a dry compost heap with a higher temperature the seeds were found to be little injured. These being amongst the seeds of the greatest vitality, it is quite certain that other seeds could be destroyed in the manner mentioned. This temperature can be obtained by due attention to the fermentation of the manure heap.

The white daisy being in great abundance on

the grass land, the Board also inquired at what stage after blooming did the seed mature enough to germinate. After a series of careful examinations it was ascertained that it was not safe for the farmer to depend wholly upon early cutting for the purpose of preventing the seeds from reaching the germinating stage, for although few seeds matured before the full flowering period of the grass, they ripened in a very few days afterwards. It is therefore the safest plan to compost the manure containing seeds of the white daisy.

These facts are of great significance to the farmer who spreads noxious weeds over his fields by means of the application of unfermented manures. Most farmers, however, already know the germinating powers of weed seeds, but they are now in possession of more accurate information by means of which they may be destroyed.

In an address before the Michigan Horticultural Society, Dr. R. C. Kedzie said that some writers seemed to regard the manure as the crude material to be manufactured into crops by the agency of the plant. They regard the soil as a passive agent in this process, useful merely as a receptacle to hold the manurial material until called for by the plant. The soil is something more than the platter to hold the plant's dinner—it is the roast beef itself, the principal dish of the meal—while the manures we use with profit are merely the salt and mustard, to make the beef palatable and digestible. If we buy all the potash, phosphoric acid, and ammonia, to make a ton of clover hay at commercial rates, we will have expended \$1.23; and for twenty-five bushels of wheat \$26, to say nothing about the labor in raising and securing the crop, the rent of land, etc.

Pyrethrum is well spoken of as an insect powder. It is cheap, said to be poisonous only to insects, and very effectual. At the experiment station at Amherst, they mix a tablespoonful of the insect powder in a pailful of equal parts of water and buttermilk and sprinkle it on currants, potatoes, or other plants infested with bugs or worms. The buttermilk makes the powder stick to the plant, and in about a half an hour the insects get a good mouthful of it, curl, drop to the ground and die. Should it prove effectual for the rose bug on grapevines, pyrethrum will certainly be a blessing. The plant is easily grown in gardens.

At a meeting of the New York State Agricultural Society the following conclusions were adopted on the application of manures: 1. Manure which consists chiefly of the droppings of animals should be applied as soon as practicable to the soil. 2. Manure consisting largely of straw, cornstalks or other fibrous matter, should be first rotted to become fine. 3. Manure should be applied at or near the surface of the soil or should be slightly buried. 4. For hoed crops, and especially for corn crops, it may be buried deeper than for straw crops.

The ADVOCATE, with its great circulation of over 20,000 copies each month, is the unrivalled medium to reach the wants of every leading farmer or his family in this Dominion.

The Landreth Wheat,

The accompanying cuts of the Bonell or Landreth wheat are from the catalogue of D. Landreth & Sons, Philadelphia, Penn. The wheat is highly spoken of and commended by many. When growing side by side, the heads very much resemble the Martin's Amber, both being bald wheats, but the Landreth is a whiter wheat. We have not yet seen a field of this wheat in Canada, although there may be some; but we have seen several very fine pieces of the Martin's Amber. Despite the fact that it is not either a midge proof or rust proof variety, there are several pieces on farms in different townships in Middlesex where it looks better than other wheats in the same vicinity, and the owners think very highly of it. From the numerous pieces we have examined, we feel justified in commending it for trial.

The Turnip Flea Beetle.

The director of the New York Experiment Station, Mr. E. L. Sturtevant, has completed a number of experiments with reference to the destruction of the turnip flea beetle, *Naltica striolata*, which attacks the leaves of young cabbages, cauliflowers, turnips and radishes. Amongst the numerous remedies tested, he found a saturated decoction of tobacco water to be the most effective. The decoction was made by soaking tobacco leaves in cold water for 24 hours, when the water was poured off and applied by means of a garden sprinkler. Many of the remedies used retarded the growth of the plants, but it was found that tobacco water stimulated their growth as well as destroyed the insects. Air-slacked lime dusted over the plants was also beneficial, and its effects were lasting in dry weather. Tobacco leaves cut fine by a fodder cutter and placed around radish plants had a good effect in keeping off the insect. None of the remedies tested had any effect in destroying the radish fly, *Anthomyia radicum*, which has proved very destructive to radishes on heavy soils; but liberal mulching with coal ashes the previous season prevented the roots from being attacked by this maggot.

Dr. Kedzie, of Michigan Agricultural College, says: While science has aided those engaged in every other pursuit and calling, the farmer, the most important of all, and the one without whom no other could exist, has been allowed to grovel in the blackness of ignorance, and what little he has learned has been by sad experience. We want more science in agriculture; we want to know more of the relations of the soils to plant-growth, of the nutritive power of the soil.

The Ensilage Question.

The practice of packing and preserving green fodder in silos or cellars by excluding the air has suffered a serious relapse. For some time past the agricultural press on both sides of the Atlantic has been burdened with articles on the merits and demerits of the system; but we have purposely refrained from saying anything on the subject, knowing that our Canadian farmers have been very little affected by the

shown that a portion of the grass in the silo is converted into less nutritious compounds, acids being formed which are not only injurious to the animal system, but also prejudicial to the health of human beings who consume the productions. Fresh ensilage grass being considerably more nutritious and digestible than cured hay, it will be seen that a great loss of nutriment may occur in the silo before ensilage becomes inferior to hay; indeed good ensilage

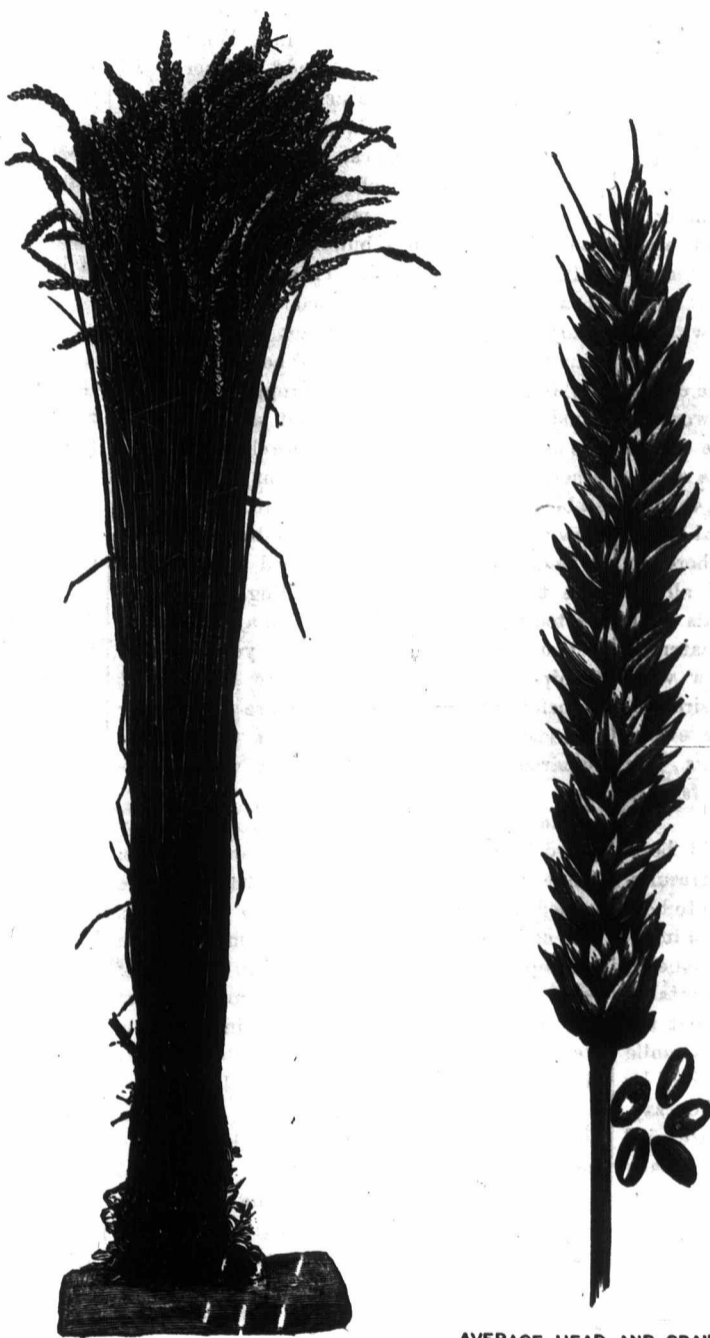
may always prove to be of more practical value than bad hay. Until some means is devised that will effectually prevent the souring of grass in the silo, we advise the farmers of Canada to pay no attention to the boom. Prof. Manly Miles professes to have discovered a remedy for the destruction of the bacteria or germs which cause the fermentation; he proposes to raise the temperature of the silo to about 120° Fahr., but this has yet to be put to a sufficiently practical test.

But the danger is not confined to ensilage. Brewers' grains and other sour foods are a still more injurious form of fermented stuffs, and are extensively used in some dairy districts. Feeding fermented foods is but a disguised form of adulteration which dairy-men are forced to adopt in order to be able to compete with unscrupulous dealers. The products of such foods are watery and rancid, although when given in small quantities with other foods no apparent injustice is done.

The continuance of wet hay-making seasons in England has necessitated the adoption of the ensilage system, but there is no cause why the farmers in the United States should have become so elated with it. The present season in England has been dry, and the hay has been secured in a good condition, although the crop is somewhat scanty; and this fact seems to have given the ensilage rage its quietus in that country for the present. Numerous silos will be empty, and the work has ceased on several that have been commenced some time ago.

We are pleased to learn that Sir J. B. Lawes has announced his intention to put the system to a thoroughly practical and scientific test; and we hope his efforts will be attended with success. Many advantages would occur to the farmers of every country, if the system could once be established on a firm and certain foundation. Ensilage being a succulent food, the necessity for raising the more laborious root crop could almost, if not entirely, be dispensed with. Fodders sown late, or as second crops, and all aftermaths, if the weather did not turn out favorable for curing them, could be ensilaged.

In hot weather think of shelter and insurance.



SINGLE STOOL.

AVERAGE HEAD AND GRAINS.

craze. The peculiarity about this question is that the practical farmers have taken the lead, the men of science having sounded the note of warning. Sir J. B. Lawes, the world renowned investigator of the science of practical agriculture, has been foremost in denouncing the ensilage system, while the practical farmers and the so-called advanced writers on agricultural topics, have been the greatest enthusiasts in its praise. It is true that many experiments have proved the superiority of this "pickled grass" as a producer of milk so far as quantity is concerned, and this is all that practical farmers seem to be concerned in. Science has

PRIZE ESSAY.

The Best Methods of Economizing Work on the Farm.

BY D. J. MORTON, LEITH.

It is not always the amount of labor expended on an object that secures the best results. Drawing water with a sieve might be a very laborious occupation; it would certainly be a very fruitless one. The man who refused to cut wood unless he could see the chips fly, was right; and unless effort is wisely applied it is often little better than wasted.

How can we secure on the farm the greatest amount of work done with the least expenditure of labor? We answer, largely by the master being not only or chiefly a worker in the direction of manual labor, but a thinker.

If a captain should pull the ropes and wash the deck of his ship, instead of taking observations, he would not more surely meet with disaster than the farmer who works with his hands, but allows his brain to rest. On a large farm especially, the master's time can be much more profitably employed than in working by the side of his laborers. In some one of the many departments of his work his attention and time will always be required, though he never should put a hand to the actual labor.

To plan intelligently he needs a thorough acquaintance with his business in all its branches; the nature of the materials with which he operates, the nature of the materials to be operated upon. He must know what combinations to make to produce a desired result. He must keep a watchful eye everywhere and be quick to see small neglects. He must keep the whole machinery of the farm in good running order.

Like every other worker, he should be a specialist, but he will not reach the best results, even in his own calling, unless he brings to bear on his work a mind enriched by general information and culture. If, after he has done all this, he has time to spare, he may profitably employ it in working with his men—but not before. I can see the contemptuous smile with which this statement will be received by many farmers. They have worked, they say, and done well by working, and we are glad that this assertion is true. Without steady and pains-taking work no success is possible. I only affirm that had they worked in a different way they would have done still better. This is especially true of farming as it now exists in the older parts of our country. It is becoming every year less and less a matter of muscle, and more a matter of mind. The introduction of machinery for almost every purpose is lightening the labor to an extent undreamed of by our fathers; and at the same time doing the work in a manner as superior as its speed. The employment of these machines to the fullest extent is one method of securing the desired economy. The farmer who could prefer the old implements to the reaper, the mower, or the horse-rake, and assert that money spent in the purchase of these latter was wasted, would be looked on as a curiosity by his neighbors, and informed that the waste lay in not buying. But while those mentioned are universally known and appreciated, many others might be named which are scarcely less useful, though not all adapted equally to every

part of the country, or the needs of every farmer. A careful examination and selection of these is one of the master's duties.

Moreover, the time has gone by in many localities when it can be said, "If you tickle the land with a hoe, it will laugh with a harvest." Reckless and ignorant cultivation has robbed the land of its first fertility, and the science of farming is now, much more than at any former time, indispensable to success. Here an intelligent knowledge of the profession (for such it is) comes in. Where can labor be profitably expended? Where will it be wasted? The farmer must understand the nature of his materials and the laws which govern them before he can answer.

Among methods of economy which are patent to every one, may be mentioned the convenient location of buildings and seasonable cultivation of the land. These are, of course, to a certain extent included in what has already been said; but it may not be out of place to notice them separately. Who has not seen buildings that might have dropped from the clouds at hap-hazard, without any regard to the uses, or at least the uses in relation to each other, for which they were meant? With the stable at one end of the farm yard and the hay mow at the other, and the cattle-byre (if there is one) and root-house arranged with special care to prevent their quarrelling, how many wasted miles must be travelled in a year? And if you "have not time" to hoe your corn or turnips at the proper season, how long will it be before you and the weeds are fighting for the mastery? How much more time will be required as the consequence of a week's neglect?

The complaint of a want of time so generally heard is really the want of good arrangement. There is time in any country that could be named for the work necessary to be done in that country. Our Canadian season of growth is comparatively short, and a large amount of work bearing directly on the production of the harvest must be crowded into a few weeks, or months at the longest. But towards the requirements of these months all the labor of the year should tend. It is not the proper time to prepare fuel when every hour should be spent in sowing, or to fish the dilapidated remains of the reaper from the long grass in the fence corner, and waste precious time in waiting at the blacksmith's shop or the foundry for repairs, when the sheaves should be falling before it. Lay in the year's fuel in the comparative leisure of winter. House your reaper when harvest is over, and see that not even a gallon of oil must be sent for when it should next be used. The securing of "time" is part of the master's business, and can be done only by well-laid plans. Do as much fall plowing as you can. Have teaming of every kind done as far as possible in winter, and invariably when roads are good. Put in drains where they are required, before you are threatened with a deluge. Have seed on hand and thoroughly cleaned by the time you are ready to sow. Put every implement in perfect order before it needs to be used. For some of these kinds of work, wet days are quite as suitable as fine ones. One point of great importance is to place a system of crops which will require attention, either for cultivation or harvesting

in succession, and not simultaneously. What these crops shall be must be determined by the capabilities, not only of each locality, but of each farm. A failure here will be surely followed by great inconvenience and serious loss. Not least, secure the best help you can get, and pay good wages, not only for the summer months (though more may then be needed), but the year round. To do without this is a most expensive economy.

Briefly stated, the methods of economizing work may be said to be a thorough knowledge of the work to be done; an intelligent adaptation of means to ends, and the employment of these means at the proper time. We must master our work, or it will master us; and we believe many a young man has left the farm in utter discouragement, largely because of labor expended to little purpose, and productive of little result.

New Brunswick Stock Farm.

After a fierce and prolonged discussion the Government of New Brunswick have taken a bold step towards the establishment of a Model Farm, but their action does not yet appear to be final. At a recent joint meeting of the Board of Agriculture and the Executive Council, the report in favor of relinquishing the present Model Farm at Rothesay and leasing the Murray Farm, was adopted by a small majority. The Murray Farm is situated on the St. John river about five miles from Fredericton and consists of 250 acres under cultivation, with between 50 and 60 acres of pasture, and 47 acres of island land, all of which are to be devoted to stock raising; but the details of management have not yet been arranged, the Government having first to ratify or reject the report. The action of the Committee in changing the location is severely criticized, it being said that York County is already the recipient of too many Government favors, and there is a probability of the Stock Farm being turned into a political machine, in which case the usefulness of the institution will be gone so far as the farmers are concerned. The Government have a grand opportunity of being able to profit by the mistakes made by the Model Farm in the Province of Ontario.

A new feature in plow shares has just been introduced into this country, which we think will prove to be a great improvement over the old style of shares. It consists of two distinct parts, one for the point and the other for the wing. These parts being both reversible, are capable of being attached to the plow independently of each other, and will fit either way, *i. e.*, when they are worn rounding on the under side can be turned over and fit as perfectly as before, bringing the self sharpened upper edge to the bottom of the furrow; this can be repeated till the share is worn out. The Cockshutt Plow Co. of Brantford are the manufacturers of this plow, which is called the Economist, and is well deserving of its name.

The July bulletin of the National Department of Agriculture, contains favorable reports regarding the leading grain crops. The condition of Indian corn is 96 compared with 88 at this time last year. Iowa taking the lead.

Poultry.

Chicken or Duck Coops and Enclosures.

These coops are made so that they are movable, and can be constructed by almost any one conversant with the use of a hammer and nails. Any refuse boards and odd pieces are all that are necessary to build them. The coops can be set in any desired position, then fenced in with boards 12 to 16 inches wide, as shown in the engraving, with stakes driven in the ground on each side of the boards, at intervals, to keep them from falling over. Put up in this manner the stakes can be withdrawn at will and the enclosure moved as often as desirable. For partitions the engraving shows a light wire mesh, which is easy to handle and can be procured at a very small cost. This is fastened into position by pinning down with wooden pins, which in this way is also made movable. Ducks kept within this enclosure need only a pan of water to paddle in until they become of sufficient age to leave the mother hen or duck.

Poultry for Market.

When chickens are from three to four months old they are generally large enough to prepare for marketing, and instead of being allowed to range the farm and exercise the flesh from their bones, the birds intended for fattening should be placed in coops or boxes with fronts composed of laths, which can, if thought desirable, be divided into compartments to hold a single fowl. The coops ought to be raised about two feet from the ground, to prevent other birds taking the food or disturbing the fatteners. The floors of the coops should be covered with about half an inch of dry earth, which can be removed as occasion requires. Buckwheat meal makes the best food, but oat or any other meal will answer the purpose. The food should be either damped, or, better still, scalded, and no more given at each time than will be eaten up clean, but a little whole grain can be kept within reach. Remember, that a constant supply of water is strictly necessary. The feeding should be done three times daily. Young fowls treated in this manner and properly fed will put on flesh rapidly, and in a couple of weeks will increase in weight about two pounds. When fat they ought to be marketed, otherwise they will lose flesh rapidly if kept beyond the proper time. It will be found that the quantity of food consumed by feeding in this manner will not be nearly as great as if the birds are kept till late fall or winter, and the prices realized for the birds will be much higher, as few bring their poultry to market until winter begins to set in, and so many are desirous of disposing of their superfluous stocks that the markets are glutted and prices down. Ducks can be treated in a similar manner.

Stock.

Glanders and Farcy in Horses.

This disease having lately revived in several parts of the Province, farmers cannot be too observant in their attention to their horses, nor in making purchases and sales. Several cases are reported in which infected horses have been fraudulently sold to persons who were ignorant of the symptoms of the disease.

Glanders is one of the most serious and loathsome diseases from which horses suffer, and may be communicated to other animals, and even to man, by inoculation or contagion. It is recognized by a deposit with ulceration on the membrane of the nose, in the lungs, etc., farcy being characterized by similar deposits and ulcerations of the lymphatics of the skin. Both diseases exist in the acute and the chronic form, the acute usually resulting from inoculation or from weak, over-worked and exhausted constitutions. Impure air is also favorable to its development. It may arise spontaneously in large cities where large numbers of horses are huddled together in ill-ventilated stables, and is most apt to attack old, low-bred animals. The chronic is the most common form.

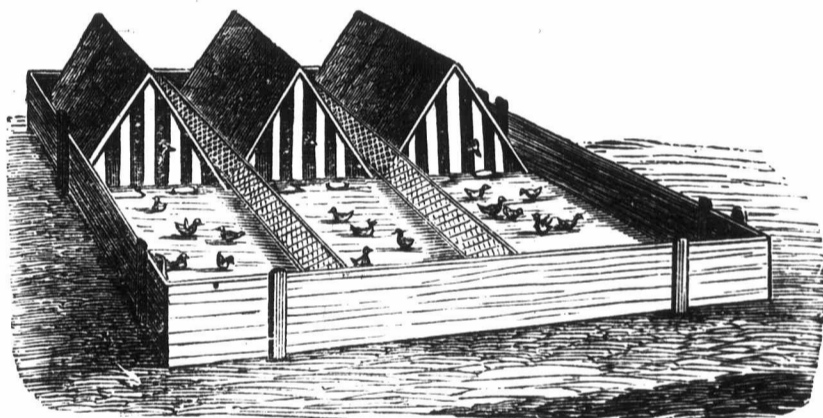
The acute form is fatal, but the chronic sometimes seems to disappear for a time, until the animal is put to hard work.

Farcy, in the acute form, is but another manifestation of acute glanders, the chronic form usually following the acute. The chronic first manifests itself by a swelling of the fetlock, usually on the hind foot, a round, hard nut-like mass being felt, which gradually turns soft, bursts and discharges serous matter. The lymphatics leading upwards swell and farcy-buds appear along the cords, the pea-like buds sometimes appearing first on the inner side of the hock or on other parts of the body. These also gradually soften and finally burst. Later on dropsical swellings appear in the limbs and other parts, which first appear soft and may be removed by exercise; otherwise they become hard and permanent.

THE NEW LAW CONCERNING GLANDERS.

Owing to the prevalence and contagiousness of this loathsome disease, the matter was brought up in the Ontario Legislature at its last session. Accordingly a bill was passed enacting that "every person having in his possession or under his charge any animal which is or appears to be diseased, shall keep such animal separate from other animals not so diseased, and shall with all practical speed give

notice to a veterinarian of the existence or supposed existence of the disease." The act proceeds to state that such veterinarian shall proceed to make an inspection, and if the disease is found to be glanders or farcy, the infected animal shall be destroyed and the carcass burnt or buried within twenty-four hours. The penalty attached to the violation of the act is \$100, and a further sum of \$50 for every twelve hours between the time of notice of the disease and the destruction of the animal.



CHICKEN OR DUCK COOPS AND ENCLOSURES.

In the acute form the appetite becomes impaired, the pulse and breathing accelerated; the eyes becomes red and watery; nose patched with yellowish-red streaks, with watery discharge therefrom; joints and limbs sometimes swollen and painful. The nasal discharge soon turns sticky, causing the skin and hairs of the nostrils to adhere, and yellow tubercles with red spots appear on the mucous membrane, passing into ulcers of irregular forms and colors. The lymphatic glands, situated on the inner side of the branches of the jaw in the neighborhood of the pulse, become hard, swollen and lumpy, accompanied by occasional coughing and wheezing in the chest. The ulcers increase in numbers and intensity, discharging bloody, fetid matter, until the victim perishes by suffocation. The chronic form is characterized by similar deposits and ulcers in the nose. The same viscid discharge is seen, but usually less sticky than in the acute form, and the tendency to cough is more rarely observed. The ulcers are often too high up to be visible, and the animal often appears to be in good health, so that it is frequently kept until other animals become contaminated.

There is no single paper which reaches as great a number of our leading farmers in each Province of the Dominion as the FARMER'S ADVOCATE. Advertise and learn results.

The Mississippi Agricultural College has appointed a professor of dairy farming. Not being able to find a practical and scientific dairyman, they have concluded to manufacture one for their special purpose.

When we consider that one of the substances produced in a silo is lactic acid, which is the same acid that is found in sour milk, it is not unreasonable to suppose that part of this acid might have passed from the food, unchanged, into the milk.—Sir J. B. Lawes.

A new discovery has been made in the process of coagulating milk in cheese-making. Prof. Sheridan Lea, of England, has made a series of experiments in the use of an extract of the seeds of a plant called *Withania*, and found it to be an efficient substitute for rennet made from a calf's stomach. Professional cheese-makers have also borne testimony of its success, but as to its economy as compared with animal rennet, no facts have been given.

The Dairy.

Summer Butter-Making.

BY JOHN GOULD.

While the dog star rages, the trials and tribulations of the butter-maker will be many, and all sorts of information about the best way of butter-making will always be in order. If all farmers' wives had their way, all dairies would be furnished with cabinet creameries of some sort, and an ice house, with cold storage provided; or else a warm, yet well-ventilated milk room built, and the plan of dairying adopted that furnishes butter for the market when butter is highest, and has the labor of milking performed when labor is the least driven by work, in the winter season. This last will gradually be adopted to a certain extent, but the time will never come when summer butter-making will be abandoned, nor less than one half of the butter produced be manufactured in the summer months. At the start butter needs far different treatment in summer than in winter. It needs more attention in the care of the milk; often skimming, and many other matters—not that it really adds to the work of making, but the change must involve new methods that lack often the better keeping of the butter. Summer butter, as a rule, enjoys a very brief existence in its perfect state, and soon becomes grease, and of little value.

Summer butter-making looks towards the control of circumstances, for if the latter gains the upper hand, disaster follows at about any point. The June and July flow of milk is always large, and the milk quarters are apt to become over-crowded, so at the start—although it is repeating an old rule—need to be ample in proportions, unventilated, and have a cool corner in which butter and cream may be kept as nearly as possible at a uniform temperature, for changes in this respect are to be avoided if possible in summer butter-making. The cabinet creamery with its volume of cold water, seems to enable the milk to escape the troubles of open setting, although in the winter, if a fairly warm room can be obtained, the difference between open and cold setting will not be so very marked. Cabinet creameries seem to be of slow adoption, mainly for the reason that their using seems a complicated system. In some of these machines with a system of little cans, apparatus for this, that, and the other thing, the supposition has some weight, but usually disappear upon trial; other systems of deep, or cold setting, notably those with a single milk dish, with under draught for milk and cream, seem perfections of simplicity, and no trouble is met with from the start, and their performance is so satisfactory, and so much labor is saved, that summer butter-making with these aids seems almost a pleasure. With the open pan, it is difficult to make a firm, solid butter, free from butter-milk and having good color and a pronounced flavor, as distinct from butter-milk, which usually is the characteristic flavor of summer butter.

With the open pan, the skimming should be done each 24 hours, and as little milk removed with the cream as possible, and if there is enough cream for a separate churning, each skimming should be worked separate. To mix the cream of several skimmings during warm

weather, is not best, as the chemical changes that take place are so rapid, that twenty-four hours will so change the cream that if a fresh stock is added, they will never properly unite, and when churned, these butter globules of different ages will have different times of "coming" when churned, so that profitable results are often defeated by this cause. In summer butter-making it is always best to mix cream of different ages as little as possible, and churn oftener, even if the churning is smaller. Nothing so improves the quality of summer butter as the frequent stirring of the cream to liberate the carbonic acid gas that rapidly forms, so that the souring of the milk will be retarded. Milk—of which there is always a proportion in cream—when it has become acid, has developed caseinous or cheesy qualities, and then has the power of "breaking up," or resolving butter fats into their different elements, which is against good butter-making; for it is in the union of these elements—some twelve in number—in their original and perfect state, that constitutes good butter.

At the slightest approach of acidity in the cream, it should be churned, and the temperature of a summer churning should never be above 58°. In slightly acid cream, the perfect point of adhesion is several degrees below that of sour cream; and if this union takes place at 62° or 63°, there is an absorption of caseinous matter by the butter globules, and when the butter "comes" it is white in color and "sticky" in quality, a result of this cause alone. This caseinous matter once fastened upon the butter grains can never be "worked" off, and the only way that it can be removed is by repeated washings with weak brine, but then only partially. If the churning is done at from 56° to 58°, and churning is suspended at the period when there is a fair separation of butter and butter-milk, the caseinous matter, milk, sugar, etc., can be separated from the butter, but if the churning is continued until the butter is gathered into a hard lump, the butter globules have enclosed within their interstices a certain per cent. of butter-milk which can not be perfectly removed by any known process. Our best plan then is to float this fine butter by adding at least a gallon of water to about each 7 pounds of butter. If some salt is added to this water, all the better, for the salt has a certain liking for the caseinous matter of the butter-milk, and adds to its density, causing it, by its increased gravity, to fall to the bottom, while the butter is correspondingly lightened. Then water has a power of dissolving the sugar in the butter-milk, and if this diluted butter-milk is drawn out from beneath the butter, a good gain in separation has been made over any known process of working it out by ladles or levers. If this process is repeated until the water runs clear, which will be the case with the third washing, working butter does not become a breaking down process, for if the globules are disrupted, its keeping power is impaired, something the same as would follow by the breaking of an egg shell, to aid in keeping the egg fresh. The grain cannot be injured by washing out the butter-milk, and the ease of washing it out by a few turns of the crank, as compared with the long and vexatious labor of

working it out, is apparent at a glance, and the perfection of one and the imperfection of the other are as clearly discernible.

This butter washed free from all of the elements that tend to hasten its decay, should be put at once upon the butter-worker, and while it is yet well charged with moisture, salt it, and fold the edges over so that the lever will not brush the dry salt into the globules when the pressure is applied. The over salting of butter is to be avoided, for salt is not needed to keep summer butter. It is the yet remaining foreign elements in it that require the salt, and to also give additional flavor. The washing with brine has "set" the color, and deepened it in advance, so that the working of butter is best now accomplished at the one operation; for all that is now needed is to dissolve the salt, and thoroughly incorporate it with the butter, and expel the surplus moisture. This should not be carried too far. The usual second working is to solidify the butter, but the washing has performed that usual office, and the first working of brine-washed butter in reality completes the process as perfectly as can ever be done, and avoids the injury liable to take place with the usual second working. The packing of butter is in reality a process that must be conformed to the consumer's wishes, but whatever form the demand assumes, the one plan left to the maker to see that it is fully carried out, is to put this butter, as soon as possible, beyond the corroding influences of the air and changes of temperature, and to resist the air nothing has yet been devised as good as brine or very wet salt thickly pressed over the butter, taking the precaution, however, to place a cloth between butter and salt. In following these directions it has been our good fortune in our private dairy, to have good solid butter, of deep color, and a fine long keeper—even with summer butter.

Effects of Salting Butter.

In his treatise on "Butter tests of Jersey cows," Major Campbell Brown, after a series of tests on the effects of salt on the weight of butter, arrived at the following conclusions:

1st. That if the butter is worked unwashed, or is washed in clear water, it will lose by salting, and the loss will average from one-half ounce to one ounce to the pound.

2nd. That if it is washed in a brine of moderate strength it will gain by salting—seldom, however, as much as one-half ounce to the pound.

3rd. That if washed in a very strong brine it will gain about the weight of the added salt, but will contain quite too much salt to be a first-class table butter.

4th. That if the butter is worked, washed, and salted in the usual manner, then set aside for twelve or twenty-four hours and reworked, it will be fair to compare it with any other sample that has been similarly treated. On several occasions I weighed ten pounds of butter apparently ready for the market, kept it twenty-four hours, reworked and reweighed it. The loss in one instance was as much as four ounces. This was in very cold weather at mid-winter. There would probably be less loss during spring and summer, as the salt would strike through the butter more rapidly.

Editor's Diary.

Many farmers laud the practice of feeding a variety of foods to their stock in winter, and yet in summer no variety at all is supposed to be necessary; that is, their pasture contains only one or two kinds of grass. Variety is necessary always, summer as well as winter; and the farmer who sows a variety of grasses and clovers can let his stock enjoy fresh early bites, fresh late bites and fresh bites all the intermediate time. Thus he gets a long season's pasturage, as well as a fresh, healthful and productive one.

Wheat prospects in Manitoba are very flattering. The seeding season was early and favorable. Very few farmers have yet commenced to run the risk of sowing fall wheat, the cause being the uncertainties of the weather in winter, and the prevalence of prairie fires in summer. The total area of spring wheat in 328 townships is 247,306 acres, being an increase of nearly 40,000 acres over 1883. Seeding lasted between April 24 and May 17. The acreage of oats is about 40 per cent. less than last year, owing to the lack of railway facilities. The dry weather in May has been damaging to oats and barley in some localities. Less potatoes and roots were planted than in former years. Weeds are gaining ground, and laws for their destruction have been passed.

A mangel pest has visited York and Scarboro' townships. Some fields were visited by Mr. William Brodie, President of the natural history society, and he estimated that out of five fields 31 per cent. of the plants had been attacked. There are two broods of the insect, one attacking the leaves at a very early stage of their growth. It resembles the common house fly but is a little smaller. The eggs are laid on the under side of the leaf, and the soft substance between the membranes is voraciously devoured by the larvæ. After dropping off, they burrow into the ground and the fly shortly afterwards appears. Mr. Brodie finds it a difficult problem to find a remedy, poisoning being dangerous to the stock. Ceasing to grow mangels would not be effective, as the insect also attacks the common dock.

The pure air of the farm has often been extolled to the skies. Farmers have the means of enjoying many other pure things as well as pure air. In looking over the voluminous tables of adulterations which are published from time to time, one is surprised at the extraordinary tenacity of human life. There is scarcely an article of commerce which we eat, drink or wear that has not its injurious, if not poisonous, compounds. Happily Canada enjoys greater immunity from such iniquities than many other countries. Unfortunately farmers, as they increase in wealth, have a tendency to sell more of the pure, unadulterated products of the farm, and buy more drugs, in order that they may keep pace with fashions of the times. Many farmers, if they knew what they were eating, drinking and wearing, would not hesitate to go back to the old days of homespun and peppermills.

A large farmer in Ontario County, N. Y., says that some years ago he had 200 acres of promising wheat, all of which was winter, killed, except these portions which were sheltered by woods. He reckoned the loss at between four and five thousand dollars, and believes that all would have been saved if it had been protected by belts of timber. How many acres of belting would this sum of money plant? Many of our own farmers have had similar experience, and it is now high time for them to deal practically with the subject.

Every farmer knows that his cattle can be bred up to any attainable standard which he may choose to aim at, whether for beefing or dairying purposes; but few know how plastic their stock is in their hands. This is strikingly exemplified by experiments made in breeding off the horns. If a heifer calf loses its horns by artificial means, and afterwards put to a horned bull, the offspring will sometimes have horns and sometimes not. By selecting the hornless ones the horns can be bred out altogether in a few generations.

In hot weather farmers have an irresistible appetite for something sour and resort to vegetables acidified with vinegar. The cause of this craving is a lack of acid secretions in the stomach. Vinegar has a tendency to satisfy this appetite, but it is far from being the best and most natural substitute for the lacking acids, and some farmers go so far as to put vinegar into the water which they drink in the field. Lactic acid is the most natural substitute, and is found abundantly in sour milk, especially buttermilk. This should be drunk in larger quantities, it being also a wholesome and nutritious beverage.

A great deal of discussion has been carried on with regard to the value of shelter for fattening animals. Prof. Shelton, of the Kansas State Agricultural College, has employed two winters in ascertaining its effects upon pigs, the sheltered ones being kept in the warm basement of a barn, and the unsheltered in an open yard on a bed of straw. From the sheltered pigs each bushel of corn made 113-16 lbs. of pork; those fed outside made only 97-10 lbs. per bushel of corn. These are the average results of ten pigs, and it will plainly be seen that the difference is wide enough to establish the economy of the protection of animals from wintry frosts and blasts.

Farmers who have not the taste for paintings or pictures in their houses, imagine that their children will develop sufficient artistic taste from the illustrations in their school books, or from pictures hung on the walls of the school room. When agricultural subjects will be introduced into our schools, they will no doubt suppose that the school room illustrations of domestic animals and farm scenery will give their minds the proper bent. Let them carry this idea a step further, and as they are slow in the work of beautifying their houses, let a life picture called an arboretum or a flower garden be drawn on the school grounds, where the children will have a practical opportunity of giving their minds an artistic bent.

Correspondence.

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

SIR.—Your paper reaching me monthly through your kindness, has greatly interested me, especially one of the articles contained in your last number, headed the "General Purpose Cow," which clearly shows the absurdity of breeding for such a purpose. I quite agree with your correspondent—breed with one object in view, either for beef or the dairy; a horse of all work cannot excel in all its duties; therefore I say to all breeders, if their mind is set on dairy animals, keep such and no others. Hitherto the Jersey has not been excelled by that of any other breed. She will acclimatise in all parts of the globe. She is to be seen in India, Australia, New Zealand, the Cape, all parts of America, and in no other place can we see her so well represented as in Canada. Among the Jerseys, as in all other breeds, we find inferior animals, and if you see they have a tendency to put on flesh beyond what is needed to keep up a good constitution, it is evident that the animal is taking too great care of herself and neglecting you. You can very soon ascertain your best dairy cows by means of tests, and become in a position to breed from nothing but good dairy stock. For years I have carried on this system, and now I am reaping the benefit of my work. This week I tested a young cow, "Edith Noble," a daughter of my bull "Welcome," three years old, having six weeks ago dropped her second calf. She gave me an average of 134 quarts of milk per day, yielding when churned fourteen pounds of butter, her weight being only 5 cwt., and her food has consisted of nothing else but grass and a bowl full of bran in her drink morning and evening. Such animals you cannot fatten, and the great difficulty is to dry them off before calving. It has often been my opinion that Canada, some day, will open out a grand field for our Jerseys. Already I have sent some very valuable cows to V. S. Fuller, Esq., of Ontario, and now I am about shipping two valuable lots to Messrs Dawes & Co., of Lachine. Such importations must, in due time, induce others to follow this example. The freights of late have been considerably reduced, and we have plenty of good dairy cows on the land at moderate prices.

ST. MARTS, JERSEY, Great Britain.

P. Le B.

SIR.—I have a Leicester ram that got chilled during the cold weather on the last of May. He lost his appetite and fell away very rapidly in flesh. He keeps looking for food, yet when it is offered him will only take a mouthful or two, and pastures but little. He would not appear sick were it not for his emaciated condition. There is very little discharge from the nostrils, but what there is, is as clear and thin as water. In the evening his ears are cold and the temperature of his whole body is low. He is a valuable sheep and I am anxious to know what treatment will bring him back.

EUGENIA, Ont.

J. H. S.

The complaint originated in inflammation of the lungs. Having stood so long, it is likely that water has formed in the lung cavity, which will almost certainly prove fatal. It could have been cured if taken in time, but treatment may now be of little avail. However, you may try iodide of potassium in half-dram doses twice a day, in feed or dissolved in cold water and given as a drench.]

SIR.—Where can the seed of the Berberry be procured and at what price?
J. K. F.
[Berberry seed can be obtained from Pearce, Weld & Co., seed merchants, London, Ont. The price is \$2 pound.]

SIR.—Why are geese and duck chickens killed in the eggs by thunder?
F. P.
THORNBERY, Ont.

[Thunder has no more effect on eggs than on anything else. This superstition has arisen from the fact that the setting hens are apt to be alarmed by reports of thunder, and in this state often revolve on their nests, thereby injuring the eggs.]

Sir.—I want to enter my protest against the tendency on the part of certain schemers to destroy our township exhibitions. Large corporations and monopolists of every kind, even not excluding our live stock kings and the manufacturers of agricultural implements and other machinery, are personally interested in curtailing, if not totally destroying, the usefulness of our genuine farmers. In the interest of the real farmers of the Province, I insist that this centralization business with regard to our exhibitions must be nipped in the bud, if indeed the budding season is not already past. It is neither for the interest of the producer nor the consumer that walking mountains of fat should be permitted to monopolize the show rings. There are many plain, modest farmers who have just as good animals as those who presume to run the shows and the markets, but are debarred from exhibiting because they choose to make an honest living in preference to gambling in prizes. Even from an educational standpoint township exhibitions should be better encouraged by our Government. They undoubtedly believe in educating the masses, in preference to the four or five from each township who can afford the time and expense of attending Provincial exhibitions, where they acquire a greater taste for the sensational than the practical. Apart from all this, Mr. Editor, let me ask what is the experience and character of those who pretend to direct the big exhibitions in the interests of the farmers? Do they understand the first principles of farming? Do they know the wants of the agricultural community? They know how to grasp for power and pelf, and if they were deprived of this knowledge they would be unfit for any employment. I am surprised that our farmers do not combine to look more sharply after their true interest, instead of leaving it in the hands of unscrupulous demagogues. G. B. CARADOC.

Sir.—Wheat harvest is in full blast here. The berry is plump and large. Along the river it will be about an average crop; on the back concessions it is very poor. In your prize essay on clover seed, the writer (in common with all other writers that I have seen), seems to think that the midge has only been in the clover for a few years. Within my own knowledge it has been in the clover for more than thirty years; and I have been told by some of the first settlers that it had been here ever since clover was introduced into the country. I think that the scarcity of wild bees has more to do with the failure of the clover seed than the prevalence of the midge. When we used to raise from 3 to 5 bushels per acre we would turn up nests of bees almost every furrow, now it is a rare thing to meet with one. S. A. A. LOUISVILLE, Ont.

Sir.—My cow gives bloody milk from one teat. There is a lump high up in the teat about the size of an Indian corn kernel. What is the remedy? E. S. B. CHARLOTTETOWN, P. E. I.
[First give her a purgative, say from three-fourths to a pound of Epsom salts (according to size of cow). Bathe the inflamed quarter of the udder with hot water three times a day, and oil afterwards with goose oil. Milk the diseased teat thoroughly at least three times a day.]

Sir.—1. Is there any sure sign by which I can be sure that an old mare is in foal? She is 17 years old. 2. How can I get my trotter colt, 1 year old, to hold his tail straight? He holds it about seven inches straight, and then right off to one side. And at what age will I begin to train him to get over the turf. 3. Is there any plan to bring four two-year old heifers into season? They are in good heart, having got roots once per day, plenty warm water with ground oats in it. They are Arishire grades. 4. What kind of cement do I need to use to hold in the sap of my manure heap, when building a cistern? I am sick seeing the fine black essence floating in my neighbor's ditch after all my work collecting it. 5. On what line of railway does a large Hereford breeder by the name of Stone reside, and what will his price of bull calves of the afore said breed be? J. K. F. LA CUCHE.

[1. In about three months after service an examination of her vagina will reveal whether the mare is in foal or not, but it requires an expert to make the examination. Watch if she comes in season. 2. An operation called nicking the tail must be performed by a skilled veterinary. You may commence training him at the age of 2 years, but don't exercise him much till he is full grown. 3. Give plenty salt and a purgative medicine (say $\frac{1}{2}$ lb. of Epsom salts) once or twice a week. This usually proves effective; but if not Cantharides may be given, but being dangerous, an experienced man should be employed to administer the doses. 4. There are three kinds of cement in general use, viz., Portland, an English cement, costing \$4.50 per barrel here; American, \$2.25, and Canadian, \$1.75, a barrel containing three bushels. If you want to make a good cistern we would advise you to use the American cement, except around the top, to the depth to which the frost penetrates, where you may use the Portland; of course the Portland all through would make the best cistern if you don't mind the expense, and the Canadian would make a fairly good one. We wish all the farmers would get sick at seeing the life blood of their manure running to waste. 5. Mr. F. W. Stone lives near Guelph, on the G. T. R., about 50 miles west of Toronto. By writing to him you will be able to ascertain the price of his bull calves.]

Sir.—I have a young horse, four years old, whose throat, since being turned on the grass, is very much swollen, sometimes the swelling going away, but quickly returns. The horse shed his front teeth last winter and did not winter very well. Since putting in my crop I put a rowel in his breast and turned him out to grass. BROOKLYN, N. S. T. G. H.

[Apply some stimulating liniment to the swelling on the throat, such as ammonia, turpentine and oil, not strong enough to blister. Give him one dram of nitrate potash and one dram of iodide potash in his feed every night. If the swelling continues put him in the stable and feed him in a rack or high manger.]

Sir.—1. We have a heifer two years old which has a lump growing on her flank. It appears to be only fast to the skin. It was about as large as a hen's egg six weeks ago, but now it is about 5 or 7 inches. It grows very much like warts, one part to another. Would you let me know if it can be taken off or not, and how to do it? Or would it be better to beef her? 2. What is the name of the enclosed root? SUBSCRIBER. INGERSOLL, Ont.

[1. Remove the tumor with the knife; if it should bleed, use a little Ferri Perchloride on it, then dress it once a day with arsenic solution, which will destroy any parts left by the knife. If she is a good cow keep her, as she will be sure to get all right if the operation is performed by a skillful veterinary. 2. The specimen you send is too small and withered. Send us a fresh whole plant with flower and root.]

Sir.—I have a horse that was blistered on the hip about a year ago, and the hair has not grown on it yet. Is there anything that I could apply to bring it on? I have also a cow that I have been trying to fatten, but she is running nearly all the time and does not thrive well at all. What can I do to prevent her running, as I think that is the reason why she does not fatten? SUBSCRIBER. HARRISTON, Ont.

[If there is a person in your neighborhood who understands spaying, you should get the operation performed, after which she will fatten like a steer; otherwise no other treatment will avail.]

Sir.—I have a fine eight-year-old mare which had a colt three years ago last April, but has not been in season since. Can you give me any remedy that will bring her around for serving? W. H. B. ST. CATHARINES, Ont.

[There is no sure remedy for bringing mares in season. Put a handful of salt into her box every day with her oats or bran, and give her six or eight drams of Barbadoes aloes. This remedy has often helped.]

Sir.—Will you please answer, through your next issue, the following questions:—1. Is there any Shorthorn herd book in Canada that will record a calf got by a pure-bred cow and a first cross bull? If so, where does the Secretary live? 2. What number of cows should a yearling bull be allowed to serve? 3. What kind of feed should a bull that is thin in flesh be fed with in order to fit him for the shows this fall? 4. How many Shorthorn herd books are there in Canada? K. E. F. BROWNSVILLE.

1.—No. 2.—The fewer the better. So much depends upon the vigor and breed of the bull that no definite rule can be given. Many yearling bulls have been ruined by letting them serve too many cows. A bull will last longer and be more vigorous by not letting him serve till his second year. 3.—Good timothy and clover mixed; ground grain (mixtures of any number of the different kinds—peas, oats, barley and corn), oil-cake, bran, roots and condimental foods. The quantities given will depend upon the age and size of the animal, and the ration should be changed every few days. A good proportion would be one part bran or oil-cake, three parts grain mixture, ten parts roots, and all the hay he will eat. 4.—Two.]

Sir.—In your August issue please give me advice about the following:—1. I have a well which is too near the manure cellar for using the water in the house, but good enough for the cattle, washing, etc.; but it gets very low in summer, and to keep up the supply I propose to run the soft water off the roofs of the buildings into the well. The well itself is 30 feet deep, and is fed by springs. Would this answer, and would I need to run the water through a filter on its way to the well or no? Then, again, would rain water keep good in a well? I notice that whenever rain water stands for a time in a barrel or hogshead it gets very foul, but perhaps that is caused by the hot sun. The water would be pumped up to the cattle by means of a force pump. G. E. S. FREDERICTON, N. B.

[Water that is not good enough for human beings is not fit for stock, especially milk cows. You do not need a filter. In a deep, well-covered cistern or well, rain water will keep good for years.]

Sir.—Will you please answer the following in your next issue:—1. Can I make ensilage of red clover? Will it do to put ensilage into a silo when wet with dew or rain? Is it necessary to cut red clover into chaff before putting it into a silo? 2. I am wanting a strong double furrow sulky plow; where can I obtain one with a fourteen inch cut? X. Y. Z.

COOKSHIRE.
[1.—Red clover makes as good ensilage as any other kind of fodder. Grass can be safely ensiled when damp with dew or rain, but not when wet. It packs and feeds better when cut, but it is not absolutely necessary to cut it. It is usually cut into such lengths. 2.—Write to the Cockshutt Plow Co., Brantford, Ont. Mention that you saw their advertisement in the FARMER'S ADVOCATE.]

Sir.—Be kind enough to give me some cure for cows that have swollen bags and teats from poison of some kind which they get in the woods. I had four troubled with it; one took it in the front part of her bag. Another got it all over her bag, and she died. I expect another will die, as she is drenched up so with it, and it seems to go into their systems. It starts first with a hard lump in the teat, and then swells all the way up their bag making it hard as a stone, also turning the milk to blood and matter. One is getting a little better. It is either poison ivy or poison oak. I had a blister on my finger, and I think I got it from the cow's teats. It caused itches in my hand to the wrist and small pimples rose in the skin. One of my cow's teats had a rash and in milking they got very sore and seemed to be hard to heal up. The cows don't eat much nor thrive well. They milk all right in their sound teats. 2.—I have some plum trees—wild plums—that are all dead except at the root. Some sprouts are growing out of the trunks and roots. I wish to know how to trim them, and what time of the year is best? G. J. W. GLENORA.

[1.—Give the cows a purgative, say three-fourths of a pound of salts each twice a week. Bath the bag with salt and vinegar warmed (a handful of salt in a pint of vinegar). Give a tablespoonful of sulphur in the feed twice a day. 2.—You may train the sheeps in spring, and they may make good trees in time; but there is a liability to their being destroyed by the same disease which attacked the parent trees.]

Sir.—Having read that the application of salt to wheat prevented rust, I determined to try it this spring. I have two fields of fall wheat. One was sown in May, with 300 lbs. to the acre; the other was sown in June, when the plant was coming into ear. I used the same quantity of salt on each field. It was sown with the utmost care and regularity. The result is this, that while my neighbors generally have good wheat, with no rust to hurt the grain, mine is nearly all badly rusted. To prove this I enclose a few stalks which are a fair average of my crop. The crop also is a light one, and as a fertilizer the salt certainly has not been of any use. After my experience, I should be very sorry indeed to depend upon salt as a preventive of rust. It is quite possible that the parties who claimed that salt prevented rust had their wheat free from rust; but what was the general condition of their neighbors' wheat at the time? In my case salt appears to have secured an extra quantity of rust. My soil is clay loam. W. E. B. MILTON WEST.

Sir.—In the last issue of the ADVOCATE I noticed a query about the proper treatment of a cactus. As I have grown them for years with success, and at present have 14 different kinds, I will venture to give my method. Take an ordinary flower pot, fill to within two inches of the top with fresh cow droppings, plant the cactus firmly in, then sprinkle earth on the top, set them out in the sun on a stone (the stone draws the heat), and let them stand for three weeks or a month without water, then water very sparingly about once a week; there is more danger of too much water than too much dryness. In the winter keep them in the light, giving very little water once a month. I have a St. Helena cactus three feet high weighing fifty lbs. which only gets a teacupful once a month in the winter. J. B. C. FULTON, Ont.

Sir.—Hops are damaged very much by a light-colored spotted grub which is found around and in the roots. 1. Of what is it the larva? 2. Would they be conveyed from one yard to another in sets? 3. By what means can a person get rid of them? S. W. MILFORD, Ont.

[1. The hop-vine borer. 2. Yes. 3. Fruit growers have tried various remedies, but none appear to be very effectual. Some recommend lime, ashes, sulphur, salt, etc., but their efficacy is doubtful. If your patch is an old one change your ground. Thorough cultivation has always a good effect. One hop-grower recommends the removal of as much dirt as possible from the vines and then applying the following compost around the root and vine: "Take equal parts of salt, quick-lime and hen manure; place the lime on the floor first, and throw on water enough to thoroughly slake it, mix the whole thoroughly, and in a couple of weeks it will be ready for use. Do not hill up the hops until the latter part of July or the 1st of August."

The Household.

Odd Minutes.

The amount of work that may be accomplished by the improvement of odd minutes is greater than one who has not tested the matter would easily believe. Five minutes a day amounts in a year to thirty hours, or three hours a day for ten days, and in that time a great deal of work can be done. In thirty years it would be three hours a day for 300 days. Looking at odd minutes thus one can easily see how the "learned blacksmith," Elihu Burritt, became versed in so many different languages. Every moment that he was not busy pounding on his anvil or its equivalent, he was pounding away at his studies, and between times was letting the knowledge he had gained become part and parcel of his mind. Had he waited until he could sit down at leisure and devote himself to the study of Greek and Latin and Hebrew and Sanscrit, the likelihood is that he would never have learned the alphabet of those languages. A single earnest purpose running through his life served as a cord on which all his odd minutes—the only jewels he ever had—were strung; as a cement to bind them into a coherent harmonious whole. The ordinary interruptions of daily life did not interrupt him. They aided him rather, for the same mental impression was renewed and renewed until it became fixed and permanent.

Our great novelists and some of our historians prefer to publish their works in serial form. They give us in one instalment only enough to occupy a brief space of time in the reading, and then let us wait for the next. Meantime we have opportunity to think over and analyze the characters and to live in the scenes and society portrayed. They prefer that our reading of their works should be fragmentary rather than continuous, for they know that thus they make a deeper, a fuller and a more lasting impression on our minds. The principle involved here is equally applicable to the pursuit of many studies and of some courses of reading. "Forty minutes a day," says the founder of the Chautauqua Literary and Scientific Circle, will enable one to go through the four years course of reading prescribed, and give one an outlook on the world of knowledge similar to that gained by a college course. The mind set in a certain direction by ten minutes reading will retain that set during intermediate hours of work, and be ready to receive an additional impulse in the same direction. These successive impulses, in the course of time, produce astonishing results. A lad of our acquaintance has read through all the plays of Shakespeare in the course of a year, by simply occupying himself with the great dramatist while going on cars and ferries to and from his place of work in the city. The very interruptions of his readings have served to fix the plots and the characters more firmly in his mind.

One who employs all the intervals of waiting and of leisure in some handicraft has in a short time a great deal to show for the industry. A lady we know has in the last year or two knit her odd minutes into a very handsome counterpane, and knotted them into some yards of handsome macreme lace. A lady physician has her rooms tastefully decorated with delicate em-

broideries, crochet work and the like, the product of her own industry in moments of listening and resting. Her patients will talk to her more freely when she seems partly occupied.

To rest we need not so much entire cessation from work as a change of work, and those accomplish a great deal in this life who provide themselves with the various occupations, and so have something agreeable and useful to fill every passing moment. Those who "gather up the fragments that nothing be lost," often have more to show than others who have full "loaves" to feed from. If we take care of the minutes the hours will take care of themselves. If to the full web of our lives every moment furnishes one single thread, how rich and varied a fabric may we weave in the course of a lifetime!

Minutes and hours when the hands are at rest and the mind sinks into perfect calm are not to be counted idle. Only the still surface of the lake reflects the depths of heaven. There are truths we cannot see when the current of life is swift, truths whose outlines are blurred and dimmed and totally obscured in the toil and moil of daily struggle, but which shine out clear and beautifully when we sink into voiceless repose. Odd moments such as these come but rarely, yet they brighten many days of labor and answer many a weary quest of the aspiring soul.

Family Circle.

Isaline and I.

"Well, Mademoiselle Isaline," I said, strolling out into the garden, "and who is the young cavalier with the black mustache?"

"What, Monsieur," answered Isaline; "you have seen him? You have been watching from your window? We did not know you had returned from the Aiguille."

"Oh, yes, I've been back for more than an hour," I replied; "the snow was so deep on the Col that I gave it up at last, and made up my mind not to try it without a guide."

"I am so glad," Isaline said demurely. "I had such fears for Monsieur. The Aiguille is dangerous, though it isn't very high, and I had been very distractedly anxious till Monsieur returned."

"Thanks, mademoiselle," I answered with a little bow. "Your solicitude for my safety flatters me immensely. But you haven't told me yet who is the gentleman with the black mustache."

Isaline smiled. "His name is M. Claude," she said; "M. Claude Tirard, you know; but we don't use surnames much among ourselves in the Pays de Vaud. He is the schoolmaster of the commune."

"M. Claude is a very happy man, then," I put in. "I envy his good fortune."

Isaline blushed a pretty blush. "On the contrary," she answered, "he had just been declaring himself the most miserable of mankind. He says his life is not worth having."

"They always say that under those peculiar circumstances," I said. "Believe me, mademoiselle, there are a great many men who would be glad to exchange their own indifferently tolerable lot for M. Claude's unendurable misery."

Isaline said nothing, but she looked at me with a peculiar inquiring look, as if she would very much like to know exactly what I meant by it and how much I meant by it.

And what did I mean by it? Not very much after all, I imagine, for when it comes to retrospect, which one of us is any good at analyzing his own motives? The fact is, Isaline is a very pretty little girl and I had nothing to do, and I might just as well make myself agreeable to her as gain the reputation of being a bear of an Englishman. Besides, if there was the safe guard of M. Claude, a real indigenous suitor, in the background, there wasn't much danger of my polite attention being misunderstood.

However, I haven't told you how I came to find myself on the farm at Les Pentes at all.

This, then, is how it all came about. I was sick of the Temple; I had spent four or five briefless years in lounging about Brick Court and dropping in casually at important cases, just to let the world see I was the proud possessor of a well-curled wig; but even a wig (which suits my complexion admirably) falls after five years, and I said to myself that I would really cut London altogether, and live upon my means somewhere on the Continent. Very small means, to be sure, but still enough to pull through upon in Switzerland or the Black Forest. So just by way of experiment as to how I liked

it, I packed up my fishing rod and my portmanteau (the first the most important), took the 7:18 express from the Gare de Lyon for Geneva, and found myself next afternoon comfortably seated on the veranda of my favorite hotel at Vevay. The lake is delightful, that we all know, but I wanted to get somewhere where there was a little fishing; so I struck back at once into the mountain country around Chateau d'Oex and Les Avants, and came soon upon the exact thing I wanted at Les Pentes.

Picture to yourself a great amphitheatre of open alp or mountain pasture in the foreground, with peaks covered with vivid green pines in the middle distance and a background of pretty aiguilles, naked at their base, but clad near the summit with frozen masses of sparkling ice. Put into the midst of the amphitheatre a clear green and white torrent, with a church surrounded with a few farmhouses on its slope, and there you have the commune of Les Pentes. But most delightful of all was this, that there was no hotel, no pension, not even a regular lodging house. I was the first stranger to discover the capabilities of the village, and I was free to exploit them for my own private advantage. By a stroke of luck it so happened that M. Clairon, the richest farmer of the place, with a pretty, old-fashioned Vaudois farmhouse and a pretty, dainty Vaudoise daughter, was actually willing to take me in for a mere song per week. I jumped at the chance, and the same day saw me duly installed in a pretty little room under the eaves of the pretty little farmhouse and with the pretty little daughter politely attending to all my wants.

Do you know those old-fashioned Vaudois houses, with their big gable ends, their deep thatched roofs, their cobs of maize and smoked hams and other rural wealth hanging out ostentatiously under the protecting ledges? If you don't you can't imagine what a delightful time I had of it at Les Pentes. The farm was a large one for the Pays de Vaud, and M. Clairon actually kept two servants: but Madame would be scandalized at the idea of letting "that Sara" or "that Lisette" wait upon the English voyager, and the consequence was that Mlle. Isaline herself always came to answer my little tinkling hand-bell. It was a trifle awkward, for Mlle. Isaline was too much of a young lady not to be treated with deferential politeness, and yet there is a certain difficulty in being deferentially polite to the person who lays your table for dinner. However, I made the best of it, and I'm bound to say I managed to get along very comfortably.

Isaline was one of those pretty, plump, laughing-eyed, dimple-cheeked, dark little girls that you hardly ever see anywhere outside the Pays de Vaud. It was almost impossible to look at her without smiling; I'm sure it was quite impossible for her to look at any one else and not to smile at them. She wore the prettiest little Vaudois cap you ever saw in your life, and she looked so coquettish in them that you must have been very hard-hearted indeed if you did not fall head over ears in love with her at first sight. Besides, she had been to school at Lausanne, and spoke such pretty, delicate, musical French! Now, my good mother thought badly of my French accent, and when I told her I meant to spend a month or two in western Switzerland she said to me, "I do hope, Charlie dear, you will not miss improving yourself in colloquial French a little." I am certainly the most dutiful of sons, and I solemnly assure you that whenever I was not fishing or climbing I missed no opportunity whatsoever of conversing with pretty little Isaline.

"Mlle. Isaline," I said on this particular afternoon, "I should much like a cup of tea; can Sara bring me one out here in the garden?"

"Perfectly, monsieur; I will bring you out the little table on the grass plot," said Isaline. "That will arrange things for you much more pleasantly."

"Not for worlds," I said running in to get it myself; but Isaline had darted into the house before me and brought it out with her own white little hands on the tiny lawn. Then she went in again and soon reappeared with a Japanese tray—bought at Montreux specially in my honor—and a set of the funniest little old China tea things ever beheld in a London bric-a-brac cabinet. "Won't you sit and take a cup with me, Mademoiselle?" asked.

"Ma foi, monsieur," answered Isaline, blushing, you other English drink it so, don't you? I will try it—for the rest: one learns always."

I poured her out a cup and creamed it with some of the delicious Vaudois cream (no cream in the world so good as what you get in the Pays de Vaud—you see I am an enthusiast for my adopted country—but that is anticipating matters) and handed it over to her for her approval. She tasted it with a little *moue*. English women don't make the *moue*, so, though I like sticking to my mother tongue, I confess my inability to translate the word. "Brrrr," she said. "Do you English like that stuff? Well, one must accommodate one's self to it, I suppose," and, to do her justice, she proceeded to accommodate herself to it with such distinguished success that she asked me soon for another cup and drank it off without a murmur.

"And this M. Claude, then," I asked; "he is a friend of yours? Eh?"

"Possibly," she answered, coloring slightly. "You see, we have not much society at Les Pentes. He comes from the Normal School at Geneva. He is instructed—a man of education. We see few such here. What would you have?" She said it apologetically, as though she thought she was bound to excuse herself for having made M. Claude's acquaintance.

"But you like him very much?"

"Like him? Well, yes; I liked him always well enough. But he is too haughty. He gives himself airs. To-day he is angry with me. He has no right to be angry with me."

"Mademoiselle," I said, "have you ever read our Shakespeare?"

"Oh, yes, in English I have read him. I can read English well enough, though I speak but a little."

"And have you read the 'Tempest'?"

"How? Ariel, Ferdinand, Miranda, Caliban?" Oh, yes. It is beautiful."

"Well, Mademoiselle," I said, "do you remember how Miranda first saw Ferdinand?"

She smiled and blushed again—she was such a little

blusher. "I know what you would say," she said. "You English are blunt. You talk to young ladies so strangely."
 "Well, Mademoiselle Isaline, it seems to me that you at Les Pentes are like Miranda on the Island. You see nobody and there is nobody here to see you. You must not go and fall in love, like Miranda, with the very first man you happen to meet with, because he comes from the Normal School at Geneva. There are plenty of men in the world, believe me, beside M. Claude."

"Ah, but Miranda and Ferdinand both loved one another," said Isaline archly; "and they were married and both lived happily ever afterward." I saw at once she was trying to pique me.

"How do you know that?" I asked. "It doesn't say so in the play. For all I know Ferdinand lost the crown of Naples through a revolution and went and settled down at a country school in Savoy or somewhere and took to drinking, and became brutally unsober and made Miranda's life a toil and a burden to her. At any rate I am sure of one thing—he wasn't worthy of her."

"What made me go on in this stupid way? I'm sure I don't know. I certainly didn't mean to marry Isaline myself; at least not definitely; and yet when you are sitting down at tea on a rustic garden seat, with a pretty girl in a charming white crimped cap beside you, and you get a chance of insinuating that other fellows don't think quite as much of her as you do, it isn't human nature to let slip the opportunity of whispering it."

"But you don't know M. Claude," said Isaline practically, "and so you can't tell whether he is worthy of me or not."

"I'm perfectly certain," I answered, "that he can't be even though he were a very paragon of virtue, learning and manly beauty."

"If Monsieur talks in that way," said Isaline, "I shall have to go back at once to mamma."

"Wait a moment," I said, "and I will talk, however you wish me. You know, you agree to give me instruction in conversational French. That naturally includes lessons in conversation with ladies of exceptional personal attractions. I must practise for every possible circumstance of life. So you have read Shakespeare, then. And any other English books?"

"Oh, many. Scott and Dickens, and all, except Byron. My papa says a young lady must not read Byron. But I have read what he has said of our lake in a book of extracts. It is a great pleasure to me to look down among the vines and chestnuts there, and to think that our lake, which gleams so blue and beautiful below, is the most famous in poetry of all lakes. You know, Jean-Jacques says, 'Mon lac est la premier,' and so it is."

"Then you have read Jean-Jacques, too?"
 "Oh, mon Dieu, no. My papa says a young lady must especially not read Jean-Jacques. But I know something about him—so much as is *convenable*. Hold, here! Do you see that clump of trees down there by the lake, just above Clarens? That is Julie's grove—'le bosquet de Julie,' we call it. There isn't a spot along the lake that is not thus famous, that has not its memories and its associations. It is for that that I could not choose ever to leave the dear old Pays de Vaud."

"You would not like to live in England, then?" I asked. (What a fool I was, to be sure.)
 "Oh, ma foi, no. That would make one too much shiver, with your chills and your fogs, and your winters. I could not stand it. It is cold here, but at any rate it is sunny. Well, at least, it would not be pleasant."

But, after all, that depends. You have the sun, too, sometimes, don't you?"

"Isaline!" cried Madame from the window. "I want you to come and help me pick over the gooseberries!" And to say the truth I thought it quite time she should go.

II.

A week later I met M. Claude again. He was a very nice young fellow, there was not a doubt of that. He was intelligent, well educated, manly, with all the honest, sturdy, independent Swiss nature clearly visible in his frank, bright, open face. I have seldom met a man whom I liked better at first sight than M. Claude, and after he had gone away I felt more than a little ashamed of myself to think I had been half trying to steal away Isaline's heart from this good fellow, without really having any deliberate design upon it myself. It began to strike me that I had been doing a very dirty, shabby thing.

"Charlie, my boy," I said to myself, as I sat fishing with bottom bait and dangling my legs over the edge of a pool, "you've been flirting with this pretty little Swiss girl; and, what's worse, you've been flirting in a very bad sort of way. She's got a lover of her own; and you've been trying to make her feel dissatisfied with him, for no earthly reason. You've taken advantage of your position and your fancied London airs and graces to run down by implication a good fellow who really loves her, and would probably make her an excellent husband. Don't let this occur again, sir." And having thus virtuously resolved, of course I went away and flirted with Isaline next morning as vigorously as ever.

During the following fortnight M. Claude came often, and I could not disguise from myself the fact that M. Claude did not quite like me. This was odd, for I liked him very much. I suppose he took me for a potential rival; men are so jealous when they are in love. Besides, I observed that Isaline tried not to be thrown too much with him alone; tried to include me in the party wherever she went with him. Also, I will freely confess that I felt myself every day more fond of Isaline's society, and I half fancied I caught myself trepidating a little inwardly now and then when she happened to come up to me. Absurd to be so susceptible, but such is man.

One lovely day about this time I set out once more to try my hand (or rather my feet) alone upon the Aiguille. Isaline put me up a nice little light lunch in my knapsack, and insisted upon seeing that my alpenstock was firmly shod and my pedestrian boots in due climbing order. In fact, she loudly lamented my perversity in attempting to make the ascent without a guide; and she

must even needs walk with me as far as the little bridge over the torrent beside the snow line to point me out the road the guides generally took to the platform at the summit. For myself, I was a practised mountaineer, and felt no fear for the result. As I left her for the ice, she stood a long time looking and waving me the right road with her little handkerchief, while as long as I could hear her voice she kept on exhorting me to be very careful. "Ah, if Monsieur would only have taken a guide! You don't know how dangerous that little Aiguille really is."

The sun was shining brightly on the snow; the view across the valley of the Rhone, toward the snowy Alps beyond, was exquisite; and the giants of the Bernese Oberland stood out in gloriously brilliant outline on the other side against the clear blue summer sky. I went on alone, enjoying myself hugely in my own quiet fashion, and watching Isaline as she made her way slowly along the green path, looking round often and again, till she disappeared in the shadow of the pinewood that girt round the tiny village. On farther still, up and up and up, over soft snow for the most part, with very little ice, till at last, after three hours' hard climbing, I stood on the very summit of the pretty Aiguille. It was not very high, but it commanded a magnificent view over either side—the Alps on one hand, the counterchain of the Oberland on the other, and the blue lake gleaming and glowing through all its length in the green valley between them. There I sat down on the pure snow in the glittering sunlight and ate the lunch that Isaline had provided for me with much gusto. Unfortunately I also drank the pint of white wine from the head of the lake—Yvorne, we call it, and I grow it now in my own vineyard at Pic de la Baume—but that is anticipating again;

as good a white wine as you will get anywhere in Europe in these depressing days of blight and phylloxera. Now, a pint of vin du pays is not too much under ordinary circumstances for a strong young man in vigorous health, doing a hard day's muscular work with legs, arms and sinews; but mountain air is thin and exhilarating in itself, and it lends a point to a half bottle of Yvorne which the wine's own body does not by any means usually possess. I don't mean to say so much light wine does one any positive harm; but it makes one more careless and easy going; gives one a false sense of security, and entices one into paying less heed to one's footsteps or to suspicious looking bits of doubtful ice.

Well, after lunch I took a good look at the view with my field glass; and when I turned it toward Les Pentes I could make out our farmhouse distinctly, and even saw Isaline standing on the balcony looking toward the Aiguille. My heart jumped a little when I thought that she was probably looking for me. Then I wound my way down again, not by retracing my steps, but by trying a new path, which seemed to me a more practicable one. It was not the one Isaline had pointed out, but it appeared to go more directly, and to avoid one or two of the very worst rough-and-tumble pieces.

I was making my way back, merrily enough, when suddenly I happened to step on a little bit of loose ice, which slid beneath my feet in a very uncomfortable manner. Before I knew where I was I felt myself sliding rapidly on, with the ice clinging to my heel, and while I was vainly trying to dig my alpenstock into a firm snow-bank I became conscious for a moment of a sort of dim, indefinite blank. It was followed by a sensation of empty space, and then I knew I was falling over the edge of something.

Whirr, whirr, whirr, went the air at my ear for a moment, and the next thing I knew was a jar of pain and a consciousness of being enveloped in something very soft. The jar took away all other feeling for a few seconds; I only knew I was stunned and badly hurt. After a time I began to be capable of trying to realize the position; and when I opened my eyes and looked around me I recognized that I was lying on my back, and that there was a pervading sensation of whiteness everywhere about.

In point of fact I was buried in snow. I tried to move, and get on my legs again, but two things very effectually prevented me. In the first place I could not stir my legs without giving myself the most intense pain in the spine; and in the second place, when I did stir them I brought them into contact on the one hand with a solid wall of rock and on the other hand with a vacant space, or at least with very soft snow unsupported by a rocky bottom. Gradually, by feeling about with my arms, I began exactly to realize the gravity of the position.

I had fallen over a precipice and had lighted on a snow-covered ledge half way down. My back was very badly hurt, and I dared not struggle up on to my legs for fear of falling off the ledge again on the other side. Besides, I was half smothered in the snow, and even if anybody ever came to look for me (which they would not probably do till to-morrow) they would not be able to see me, because of the deep covering drifts. If I was not extricated that night I should probably freeze to death before morning, especially after my pint of wine. "Confound that Yvorne!" I said to myself savagely. "If ever I get out of this scrape I shall never touch a drop of the stuff again as long as I live." I regret to say that I have since broken that solemn promise twice daily for the past three years.

My one hope was that Isaline might possibly be surprised at my delay in returning and might send out one of the guides to find me.

So there I lay a long time, unable even to get out of the snow, and with every moment causing me a horrid pain in my injured back. Still I kept on moving my legs every now and then to make the pain shoot, and so prevent myself from feeling drowsy. The snow half suffocated me, and I could only breathe with difficulty. At last, slowly, I began to lose consciousness, and presently I fell asleep. To fall asleep in the snow is the first stage of freezing to death.

III.

Noises above me, I think, on the edge of the precipice. Something coming down, oh, how slowly. Something comes, and fumbles about a yard or so away. Then I cry out feebly, and the something approaches. M. Claude's

hearty voice calls out, cheerily, "*Enfin, le voilà!*" and I am saved.

They let down ropes and pulled me up to the top of the little crag clumsily, so as to cause me great pain, and then three men carried me home to the farmhouse on a stretcher. M. Claude was one of the three, the others were laborers from the village.

"How did you know I was lost, M. Claude," I asked feebly, as they carried me along on the level.

He did not answer for a moment; then he said, rather gloomily, in German, "The fraulein was watching you with a telescope from Les Pentes." He did not say Fraulein Isaline, and I knew why at once—he didn't wish the other carriers to know what he was talking about.

"And she told you?" I said, in German, too.
 "She sent me. I did not come of my own accord. I came under orders." He spoke sternly, hissing out his gutturals in an angry voice.

"M. Claude," I said, "I have done very wrong, and I ask your forgiveness. You have saved my life, and I owe you gratitude for it. I will leave Les Pentes and the Fraulein to-morrow, or at least as soon as I can safely be moved."

He shook his head bitterly. "It is no use now," he answered with a sigh; "the Fraulein does not wish for me. I have asked her and she has refused me. And she has been watching you up and down the Aiguille the whole day with a telescope. When she saw you had fallen she rushed out like one distracted and came to tell me at the school in the village. It is no use; you have beaten me."

"M. Claude," I said, "I will plead for you. I have done you wrong and I ask your forgiveness."

"I owe you no ill will," he replied, in his honest, straightforward Swiss manner. "It is not your fault if you, too, have fallen in love with her. How could any man help it? Living in the same house with her, too! *Allons*," he went on, in French, resuming his alternative tongue (for he spoke both equally), "we must get on quick and send for the doctor from Glion to see you."

By the time we reached the farm house I had satisfied myself that there was nothing very serious the matter with me after all. The soft snow had broken the force of the concussion. I had strained my spine a good deal and hurt the tendons of the thighs and back, but had not broken any bones nor injured any vital organ. So when they laid me on the old fashioned sofa in my little sitting room, lighted a fire in the wide hearth and covered me over with a few rugs, I felt comparatively happy and comfortable under the circumstances. The doctor was sent for in hot haste, but on his arrival he confirmed my view of the case and declared I only needed rest and quiet and a little arnica.

I was rather distressed, however, when Madame came up to see me an hour later and assured me that she and Monsieur thought I ought to be moved down as soon as possible into more comfortable apartments at Lausanne, where I could secure better attendance. I saw in a moment what that meant—they wanted to get me away from Isaline. "There are no more comfortable quarters in all Switzerland, I am sure, Madame," I said; but Madame was inflexible. There was an English doctor at Lausanne and Lausanne accordingly I must go. Evidently it had just begun to strike those two good, simple people that Isaline and I could just conceivably manage to fall in love with one another.

Might I ask for Mlle. Isaline to bring tea? Yes, Isaline would bring it in a minute. And when she came in, those usually laughing black eyes were obviously red with crying. I felt my heart sink within me when I thought of my promise to M. Claude; while I began to be vaguely conscious that I was really and truly very much in love with pretty little Isaline on my own account.

She laid the tray on the small table by the sofa and was going to leave the room immediately. "Mademoiselle Isaline," I said, trying to raise myself and falling back again in pain, "won't you sit with me a little while? I want to talk with you."

"My mamma said I was to come away at once," Isaline replied demurely. "She is, without doubt, busy and wants my aid." And she turned to go toward the door.

"Oh, do come back, Mademoiselle," I cried raising myself again and giving myself, oh, such a wrench in the spine; "don't you see how much it hurts me to sit up?"

She turned back, inactively, and sat down in the big chair just beyond the table, handing me a cup and helping me to cream and sugar. I plunged at once in *meditation*.

"You have been crying, Mademoiselle," I said, "and I think I can guess the reason. M. Claude has told me something about it. He has asked you for your hand and you have refused him. Is it not so? This was a little bit of hypocrisy on my part, I confess for I know what she had been crying about perfectly; but I wished to be loyal to M. Claude."

Isaline blushed and laughed. "I did not cry for M. Claude," she said. "I may have other matters of my own to cry about. But M. Claude is very free with his confidences if he tells such things to a stranger."

"Listen to me, Mlle. Isaline," I said. "Your father and mother have asked me to leave here to-morrow and go down to Lausanne. I shall probably never see you again. But before I go I want to plead with you for M. Claude. He has saved my life and I owe him much gratitude. He loves you; he is a brave man, a good man, a true and earnest man; why will you not marry him? I feel sure he is a noble fellow, and he will make you a tender husband. Will you not think better of your decision? I cannot bear to leave Les Pentes till I know that you have made him happy."

"Truly?"

"Truly."

"And you go away to-morrow?"

"Yes, to-morrow."

"Oh, Monsieur!"

There isn't much in these two words, but they may be pronounced with a great deal of difference in the intonation, and Isaline's intonation did not leave one in which much doubt as to how she used them. Her eyes filled with tears and she half started up to go. Ingrate and wretch that I was, forgetful of my promise to M.

Claude, my eyes filled responsively, and I jumped to catch her and kept her from going, of course at the expense of another dreadful wrench to my poor back.

"Isaline," I cried, unconsciously dropping the Mademoiselle and letting her see my brimming eyes far too obviously, "Isaline, do wait awhile, I implore you, I beseech you! I have something to say to you."

She seated herself once more in the big chair. "Well, mon pauvre Monsieur," she cried, "what is it?"

"Isaline," I began, trying it over again, "why won't you marry M. Claude?"

"Oh, that again. Well," answered Isaline boldly, "because I do not love him and love somebody else. You should not ask a young lady about these matters. In Switzerland we do not think it *commo il faut*."

"But," I went on, "why do you not love M. Claude?"

"Every good quality, and—he bores me," answered Isaline. "Monsieur," she went on archly, "you were asking me the other day what books I had read in English. Well, I have read Longfellow. Do you remember Miles Standish?"

I saw what she was driving at and laughed in spite of myself. "Yes," I said, "I know what you mean. When John Alden is pleading with Priscilla on behalf of Miles Standish, Priscilla cuts him short by saying—"

Isaline finished the quotation herself in her own pretty clipped English. "Why don't you speak for yourself, John?"

I laughed. She laughed. We both looked at one another; and the next thing I remember was that I had drawn Isaline's plump little face close to mine and was kissing it vigorously, in spite of an acute darting pain at each kiss all along my spine and into my marrow bones. Poor M. Claude was utterly forgotten.

In twenty minutes I had explained my whole position to Isaline, and in twenty minutes more I had Monsieur and Madame up to explain it all to them in their turn. Monsieur listened carefully while I told him that I had an English advocate in no practice to speak of; that I had a few hundreds a year of my own, partly dependent upon my mother; that I had thoughts of settling down permanently in Switzerland; and that Isaline was willing, with her parents' consent, to share my modest competence. Monsieur replied, with true Swiss caution, that he would inquire into my statements, and that if they proved to be as represented, and if I obtained in turn my mother's consent, he would be happy to hand me over Isaline. "Toutefois," he added quietly, "it will be, perhaps, better to rescind your journey to Lausanne. The Gilon doctor is, after all, a sufficiently one."

So I waited on in peace at Les Penates. Madame had insisted upon telegraphing the news of my accident to my mother, lest it should reach her first in the papers ("Je suis mere moi-meme, Monsieur," she said, in justification of her conduct), and next morning we got a telegram in reply from my mother, who evidently imagined she must hurry over at once if she wished to see her son alive, or at least must nurse me through a long and dangerous illness. Considering the injuries were a matter of about three days' sofa, in all probability this haste was a little overdone. However, she would arrive by the very first *rapide* from Paris; and on the whole I was not sorry, for I was half afraid she might set her face against my marrying "a foreigner," but I felt quite sure that any one who once saw Isaline could never resist her.

That afternoon when school was over M. Claude dropped in to see how I was getting on. I felt more like a thief at that moment than I felt in my whole life before or since. I knew I must tell him the simple truth; but I didn't know how to face it. However, as soon as I began he saved me the trouble by saying, "You need not mind explaining. Mlle. Isaline has told me all. You did your best for me, I feel sure; but she loves you, and she does not love me. We cannot help these things; they come and go without our being able to govern them. I am sorry, more than sorry; but I thank you for your kind offices. Mlle. Isaline tells me you said all you could on my behalf and nothing on your own. Accept my congratulations on having secured the love of the sweetest girl in Switzerland." And he shook my hand with honest heartiness that cost me several more twinges both in the spine and half-guilty conscience. Yet after all, it was not my fault.

"M. Claude," I said, "you are an honest fellow, and a noble fellow, and I trust you will still let me be your friend."

"Naturally," answered M. Claude, in his frank way. "I have only done my duty. You have been the lucky one, but I must not say you a grudge for that; though it has cost my heart a hard struggle," and as he spoke, tears came for a moment into his honest blue eyes, though he tried to brush them away unseen.

"M. Claude," I said, "you are too generous to me. I can never forgive myself for this."

Before many days my mother came on hand duly, and though her social prejudices were just a trifle shocked at first at the farmhouse, with its hams and maize, which I had found so picturesque, I had judged rightly that Isaline would soon make an easy conquest of her. My mother readily admitted that my accent had improved audibly to the naked ear; that Isaline's manners were simply perfect; that she was a dear, pretty, captivating little thing; and that, on the whole, she saw no objection, save one possible one, to my marriage. "Of course, Charlie," she said, "the Clairons are Protestants; because otherwise I could never think of giving my consent."

This was a poser in its way, for though I knew the village lay just on the borderland, and some of the people were Catholics while others were Reformed, I had not the remotest notion to which of the two churches Isaline belonged. "Upon my soul, mother dear," I said, "it has never struck me to inquire into Isaline's abstract opinion on the subject of the Pope's infallibility or the Geneva confession. You see, after all, it could hardly be regarded as an important or authoritative one. However, I'll go at once and find out."

Happily, as it turned out, the Clairons were Reformed, and so my mother's one objection fell to the ground immediately. M. Clairon's inquiries were also satisfactory, and the final result was that Isaline and I were to be married before the end of the summer. The good father had a nice little vineyard estate at Picde-la-Baume, which he proposed I should undertake to cultivate, and my mother waited to see us installed in one of the prettiest little toy chaletes to be seen anywhere at the Villeneuve end of the lovely lake. A happier or sweeter bride than dearest Isaline I defy the whole world now or ever to produce.

From the day of our wedding, almost, Isaline made it the business of her life to discover a fitting wife for good M. Claude; and in the end she succeeded in discovering. I will freely admit (since Isaline is not jealous), the second prettiest and second nicest girl in the whole Pays de Vaud. And what is more, she succeeded also in getting M. Claude to fall head over ears in love with her at first sight; to propose to her at the end of a week, and to be accepted with effusion by Annette herself, and with coldness by her papa, who thought the question of means a trifle unsatisfactory. But Isaline and I arranged that Claude should come into partnership in our vineyard business on easy terms, and give up school mastering for ever; and the consequence is that he and his wife have now got the companion chalet to ours, and between our two local connections, in Switzerland and England, we are doing one of the best trades in the new export wine traffic of any firm along the lake. Of course we have given up growing Yvorne, except for our own use, confining ourselves entirely to a high priced vintage wine, with very careful culture, for our English business; and I take this opportunity of recommending our famous phylloxera proof white Pic-de-la-Baume, London agents—but Isaline says that looks too much like an advertisement, so I leave off. Still, I can't help saying that a dearer little wife than Isaline, or a better partner than Claude, never yet fell to any man's lot. They certainly are an excellent people, those Vandois, and I think you would say so too if only you knew them as well as I do.

J. Arbuthnot Wilson, in Belgravia.

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J. Arbuthnot Wilson, in Belgravia.

Winnie May's Department.

MY DEAR NIECES.—You will doubtless be anxious, first of all, to know the result of the competition for the past month; and the prize of half a dozen silver-plated teaspoons, for the best method of canning and drying vegetables for winter use, has been awarded to Mrs. Wm. Spring, of Millbank, Ont. This month we offer a prize of a silver-plated butter-cooler for the best essay on the subject of "Friendship."

We shall hope to find a large number interested in this subject. Bear in mind that all communications must be in by the 25th of August.

Could I but see each of you now, enjoying your summer vacation, some in one way, some in another, what a pleasure would be in store for me. You are all aware of the interest I feel in my many nieces, therefore to know of your enjoyment would greatly enhance my own. Why cannot each of you write me a letter about your holidays. I feel quite sure there is not one among you but has had a few happy days, at least, during these charming summer months, of which you must be well deserving, for all who do their duty faithfully as I am sure my nieces try to do, cannot help finding pleasure even in their daily surroundings.

MINNIE MAY.

Answers to Inquirers.

FERN-LEAVES.—1. For a first-class governess, French and German are mostly required, as well as a thorough knowledge of English and music. 2. To wash a Shetland shawl, make a good soap lather by boiling ½ lb. of yellow soap in two quarts of water; put in your shawl, not having the water too hot. Shake it well about in the water, neither rub nor wring it, but squeeze the water out, rinse, and tack on a clean board or table to dry.

HARRIE AND ALBIE.—The recipe for trifle was overlooked last month, so we give it now. Arrange macaroons and sponge cakes in a deep glass dish, place about them little slices of currant jelly or jam, and saturate with wine or brandy; then pour over a thick custard and allow to become firm; then take a pint of cream,

flavor some sugar by rubbing it on a lemon until it takes the essence of the peel, and with it sweeten the cream to taste, then whip the cream to a light froth and pour over the whole.

LOTTIE, P. E. I.—1. Would you kindly tell me the origin of the expression, "That's a feather in your cap." 2. And also who was it that said there was no royal road to learning? 3. Can you give me the lines commencing, "Be good, sweet maid, and let who will be clever?" Whom are they by? Ans.—1. It originates with the wild tribes of Asia and America, who add a new feather to their headgear for every enemy slain. A Caufrirs of Cabul adorns himself with a new feather for every Mussulman slain by him. The custom was a common one among the Lycians and other nations of antiquity. It is intended to express a mark of distinction. 2. Ptolemy Soter once asked Euclid to instruct him in the science of geometry in a more concise manner. Sire, said Euclid, there is no royal road to learning. 3. We believe that the lines you refer to were first dedicated by Chas. Kingsley to his daughter. Two stanzas are as follows:

I'll teach you how to sing a clearer carol Than lark's, who hails the dawn o'er breezy down, To earn yourself a purer poet's laurel Than Shakespeare's crown.

Be good, sweet maid, and let who can be clever, Do noble things, not dream them, all day long; And so make life, death, and that vast forever One grand sweet song.

H. S. T.—If a young man goes to see a young lady, and her father, brother and two sisters persist in remaining in the room during his visit, what would you advise the young man to do. Ans.—Why should they not remain in the room? He surely has not the assurance to expect that a whole family should be turned out of their drawing-room so that he may have an opportunity to whisper soft nonsense to a young lady who probably does not wish to hear. Even an engaged couple have no right to expect that they shall always have a room to themselves: such is not customary in good society. In the case you quote the family is evidently more refined than the visitor.

SUBSCRIBER.—Which would be most proper, for the gentleman or lady of the house to rise first from the table while entertaining guests? Ans.—The hostess makes the first move, but must be watchful to see that all her guests have dined, before she shows any inclination to leave the table. Politeness demands that both host and hostess should make a pretence of eating 'ntil all their guests have quite finished their meal.

VIOLET.—1. Is it proper for a young man to pay attention to a young lady, whose parents are opposed to his advances, the lady herself being willing. Ans.—1. That is a difficult question. As a rule parents' wishes should be respected, but sometimes where affection is strong the rule seems hard. If the lady is of age, she may decide for herself, but it is always well to respect the advice of parents. Waiting is a good test both of love and character, and you know all things come to those who wait.

EDWIN SOBEL.—We can hardly give instruct-

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tions for penmanship; think practice the main thing. You could obtain all necessary instructions by procuring either a Spencerian or Gastrill copy book.

The Prize Method of Canning and Drying Vegetables for Winter Use.

BY MRS. WM. SPRING, MILLBANK, ONT.

When canning vegetables try and procure those freshly gathered, especially tomatoes, corn and beans. Use self-sealing glass jars, well warmed by rolling in warm water before using; when done cover as quickly as possible and set in a cool dark cellar.

CANNED TOMATOES.

Take ripe tomatoes, pour boiling water over them, when they will skin without trouble. Boil 20 minutes in a porcelain pan, fill your jars as quickly as possible with the boiling tomatoes and seal.

CANNED BEANS.

The best for this purpose are the butter bean; if they are not to be had, take caseknife or lime beans. Prepare the beans as if for the table, boil one hour, season lightly with pepper and salt, fill the jars quite full; will keep the year round.

PEAS CANNED.

Boil green peas 20 minutes, then fill jars, set the jars in warm water, let boil 10 minutes more, then seal quickly.

PEAS DRIED.

Pour boiling water over tender peas, drain 2 minutes and spread on paper to dry; when crisp put in small paper bags and hang in a dry place. They are very nice in soup; soak over night before using.

CORN CANNED.

Gather when in good eating state; place the corn, cobs and all, in a vessel, and pour boiling water over it; let it remain in the hot water 5 minutes, then cut the corn from the cob, boil one hour in a porcelain kettle, then fill your jars, putting in as little water as possible; seal quickly.

CORN DRIED.

Prepare as before; when cut from the cob, dry in a cool oven or in the sun; if it is dried out of doors cover with glass.

PUMPKINS CANNED.

Peel and scrape the pulp and seeds from them; then cut in small pieces, 2 inches square will do, then put in a close fitting steamer; boil 2 hours; then put in a porcelain kettle and to every quart add 2 ounces sugar, boil together 5 minutes, then put in jars and seal.

PUMPKIN DRIED.

Steam as before, then put in a porcelain kettle and stir until brown, dry in a cool oven.

HUBBARD SQUASH CANNED.

Cut them open, seed them, turn them out side down in a pan with some water in; set it in the oven; when done scrape it with a spoon, then put in a porcelain kettle over a slow fire; when well browned put in self-sealing jars made quite hot and seal quickly.

MUSHROOMS CANNED.

Cut off the end of the stalks, and pare neatly some middle-sized or button mushrooms, and put them in a basin of water with the juice of lemon as they are done. When all are prepared take them from the water with the hands to avoid the sediment, and put into a stew pan

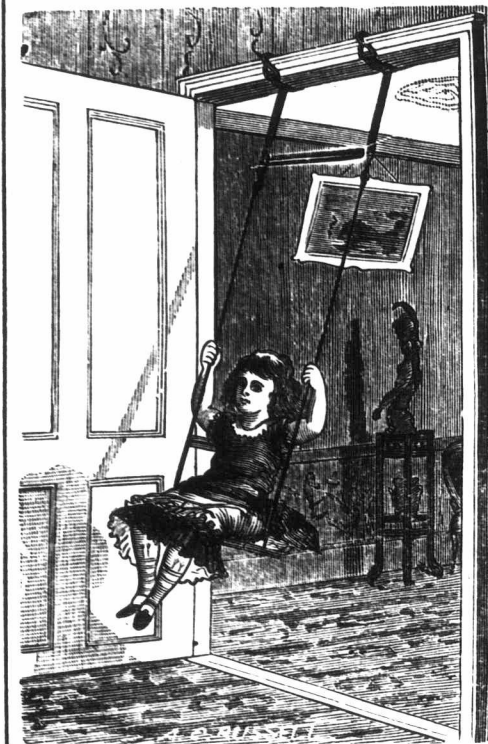
with a little white pepper, salt, and a little lemon juice; cover the pan close, and let them stew gently $\frac{3}{4}$ of an hour, then fill into jars.

HORSE RADISH.

Take up the roots in November, clean and scrape well, grate with a potato grater, then dry in the oven. If one likes the flavor of vinegar it is very nice for meat without drying, merely putting the freshly grated radish in vinegar and corking tight; will keep all winter.

Door Swing.

The accompanying cut represents something novel in the way of a child's swing, made by the Otter Sweeper Co., Otterville, Ont. It is a simple arrangement and fastens easily and



securely to the casing of any door, and gives the children much pleasure and amusement, especially rainy days or in the winter when they cannot go outside.

Chimney Swallows.

I slept in an old homestead by the sea;
And in their chimney nest,
At night, the swallows told home-love to me,
As to a friendly guest.

A liquid twitter low, confiding, glad,
From many glossy throats,
Was all the voice, and yet its accents had
A poem's golden notes.

Quaint legends of the fireside and the shore,
And sounds of festal cheer,
And tones of those whose tasks of love are o'er,
Were breathed into mine ear.

And wondrous lyrics felt, but never sung,—
The heart's melodious bloom;
And histories whose perfumes long have clung
About each hallowed room.

I heard the dream of lovers as they found
At last their hour of bliss,
And fear and pain and long suspense were
drowned
In one heart-healing kiss.

I heard the lullaby of babes, that grew
To sons and daughters fair;
And childhood's angels sitting as they flew,
And sobs of secret prayer.

I heard the voyagers, who seemed to sail
Into the sapphire sky,
And sad, weird voices in the autumn gale,
As the swift ships went by;

And sighs suppressed and converse soft and low
About the sufferer's bed,
And what is uttered when the stricken know
That the dear one is dead;

And steps of those who in the Sabbath light
Muse with transfigured face;
And hot lips pressing, through the long, dark
night,
The pillow's empty place;

And greetings of old friends whose path
In youth had gone apart,
But to each other brought life's aftermath,
With uncorroded heart.

The music of the seasons touched the strain,
Bird-joy and laugh of flowers,
The orchard's bounty and the yellow grain,
Snow-storm and sunny showers.

And secrets of the soul that doubts, and yearns,
And gropes in regions dim,
Till meeting Christ with raptured eye, discerns
Its perfect life in Him.

So, thinking of the Master and His tears,
And how the birds are kept,
I sank in arms that folded me from fears,
And, like an infant, slept.

Recipes.

CHILI SAUCE.—Twelve ripe tomatoes, four peppers, two onions, two tablespoons of salt, two of sugar, three small cups of vinegar, a little cinnamon. Peel the tomatoes and chop fine, also chop the peppers and onions, boil all together one hour, bottle after cold. A very nice relish.

FROSTED CURRANTS.—Pick five even bunches and dip one at a time into a mixture of frosted white of egg and a very little cold water, drain them till nearly dry, then roll in pulverized sugar; repeat the dip in sugar once or twice; then lay upon white paper to dry. They make a beautiful garnish for jellies, etc., and look well heaped in a dish by themselves or other fruit. Plums and grapes are nice, also oranges quartered and done in same way make a pretty dish.

Cherry and batter pudding is made of one pint of milk, two well-beaten eggs, a tablespoonful of melted butter, one teaspoonful and a half of baking powder, a little salt, flour enough to make a batter a little thicker than for griddle cakes. In this batter stir as many canned, or dried, or fresh cherries as you choose, or can afford to put in; steam for three-quarters of an hour in a pudding dish which can be sent to the table. Eat with sauce.

When two-year-old May-Blossom
Comes down in clean white dress,
And runs to find "dear auntie,"
And claim her sweet caress;—
Then auntie takes up Blossom,
And her eyes—they glow and shine,
"Oh, pretty Baby Blossom,—if you were only mine!"

When Blossom in the pantry,
High mounted on a chair,
Has nibbled at the icing
Until half the cake is bare,
Then auntie puts down Blossom,
And her eyes—they glow and shine,
"Oh! naughty Baby Blossom,—if you were only mine!"

Uncle Tom's Department.

My DEAR NEPHEWS AND NIECES.—As soon as the paper was ready to be placed in your hands last month, I threw care to the winds and set out to enjoy a week's vacation in Toronto, attracted by the Semi-Centennial. For a long time the city had been making extensive preparations for the celebration, and all citizens appeared to have done their utmost to make their places of business and private residences attractive by adorning with flowers, flags, Chinese lanterns and bunting. The city was thronged with visitors, and the streets were almost impassible during any procession, and processions seemed to be the principal entertainment. A procession on the first day represented Toronto as it was fifty years ago, and was made up of wagons and ox-carts, bearing the oldest inhabitants, dressed and employed as they were in those early days, large revolving pictures of Toronto when very young, besides all the old relics procurable were displayed; then followed the firemen's procession, which was exceedingly good; the engines, hose reels, and hook and ladder wagons shining so brightly, and tastefully decorated with large bouquets of flowers and hanging baskets, and literally covered with entwining vines. The next day there was the military procession, in which all the corps of Toronto and surrounding cities and towns took part, with fully a dozen bands interspersed, and which tended to enliven the spectacle. Each day brought other parades; the benevolent societies, the trades procession, representing nearly all the manufacturers and dealers in the city, and many of them working on the large wagons as they passed along. For instance, the employes of the cigar factories were all working, putting the tobacco through the different processes, beginning with the leaf and ending by throwing the cigars amongst the crowd; and the soap makers were employed. The mottled soap show was very good; everything was mottled, even the white horses were spotted all over with blue, which made them appear very peculiar, and all the workmen in the factory wore mottled shirts or blouses and white pants; and then a laundry came in view, filled with Chinamen hard at the tub, everything about them mottled in an amusing fashion. There were others equally as good. Amongst them I might mention the tinsmiths, which was made up of a great display of everything they manufacture; all the workmen wearing tin helmets with such things as dippers, dust-pans, strainers, collanders, skimmers, pails, etc., etc., being soldered on their tin caps. But best of all was the school children's procession composed of six thousand girls and boys, each school headed by a large banner, carried by the oldest boys, and all trying to keep pace with the music. It was indeed a grand sight, and I highly enjoyed seeing them, as I feel so interested in children, and when looking at them I could not help wondering if some of my nephews and nieces were not amongst them. I

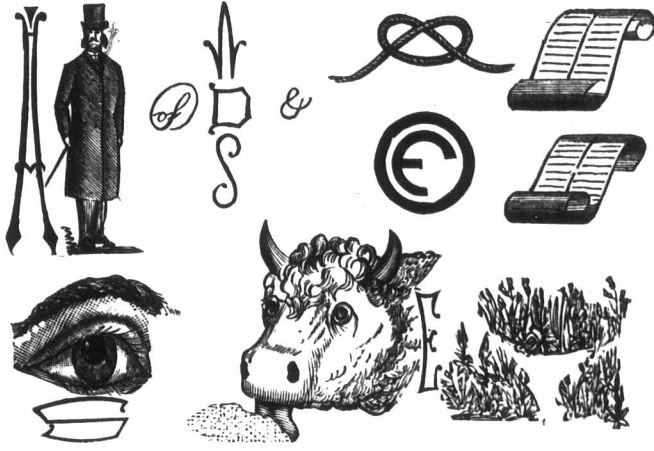
could say a great deal more, for there were other attractions, illuminations on the bay, concerts, and all manner of ways of spending your time and money, but it would take too long to tell all, besides, I want my boys and girls to talk to me, and not be always hearing myself talk; it is too one-sided. I now propose to offer a prize of 50c. to the boy or girl under fourteen who writes the best letter to Uncle Tom, describing how you spent your vacation, or upon anything you like. I will publish it next month. Now girls, try and beat the boys, and boys, try and beat the girls. Your letters must be in by the 25th as usual. Again I received several letters with no name, so do not blame me for their non-appearance. I wonder at your carelessness. Your answers were very fair on the whole last month. Geo. Van Blaricorn, first poet in No. 7 puzzle, was poor, so I did not count the answer given by you a mistake. Be sure and send me some good puzzles for next month. UNCLE TOM.

Puzzles.

1—DIAMOND PUZZLE.

1. A consonant.
2. An utensil.
3. A leap.
4. A paper.
5. Bright.
6. An animal.
7. A consonant.

FRED. D. ROSS.



2—ILLUSTRATED REBUS.

3—ENIGMA.

My first is in many, but not in few.
My second is in sunshine, but not in dew.
My third is in neat, but not in smart.
My fourth is in feeling, but not in heart.
My fifth is in evening, but not in morn.
My sixth is in grew, but not in born.
My seventh is in music, but not in tune.
My eighth is in stars, but not in moon.
My ninth is in shady, but not in grove.
And total is the name of a lady we love.

ADA ARMAND.

4—AUTHORS.

1. A small globe, an article, river in England.
2. River in Scotland, a fruit, a letter.
3. A boy's nickname, domestic fowls be-headed.
4. A metal, a worker in metal.
5. Lengthy, a mate.
6. A kind of grain, a consonant, a boy.

A. J. TAYLOR.

5—DOUBLE HIDDEN SQUARE WORD.

1. The teacher opened the package while a pupil looked on.
2. It was so paltry an offence I think they might have released him.
3. As I am alone you might stop, all of you.
4. I hope Alfred will not tease Nell again.

HARRY A. WOODWORTH.

6—CHARADE.

I am composed of three syllables. My first is a verb, used to denote an action of the voice; my second is an adjective; my third is necessary

to produce respiration; my whole is a noted place in geography. SARAH M. BRETT.

7—TRANSPOSITION.

Uto fo hwasod gsmirp teh huisnens
Touewe fo kuds het yldihta wrago
Rlpia wfoelar rae on seel voyl
Orf irhte rihtb teenhab eth oswan.

EDITH M. EARLE.

8—DIAMOND WORD.

1. A vowel; 2, devoured; 3, a country; 4, a liquor; 5, a vowel. The centrals will give two countries of Europe.

CHRISTENA HADCOCK.

9—NUMERICAL ENIGMA.

My 5, 2, 6 is an affirmative.
My 8, 7, 1, 2 is a message.
My 1, 7, 4 is a heavy weight.
My 1, 2, 3 is a number.
My 6, 7, 8 is an offspring.
My whole is a poet.

HENRY REEVE.

10—DROP VOWEL PUZZLE.

R-g-rd th- w-rld w-th c-t-t-s-y
N-r-r-s-y-r-xp-ct-t-ns h-g
S-th-t th-b-l-nc-d sc-l-sb-s-ch
Y-n-th-r-f-r-r h-p-t-m-ch.

ADA ARMAND.

11—DROP LETTER PUZZLE.

B-b-t-h-t-s-r-n-e-r-w-a-m-
g-c-a-d-s-o-e-h-t-o-b-e-m-n-
t-c-a-g-i-s-a-i-e-o-s.

MAGGIE F. ELLIOTT.

12—DECAPITATION.

Whole I am a shrill cry; behead
and I am the best part of anything;
behead again and I mean to enlarge;
transpose and behead and I am part
of the head; curtail and behead and
I am what makes men mean.

ROBERT J. RISK.

Answers to July Puzzles.

1. Be content with small beginnings would you win great ends.
2. It being Easter Sunday, my brother James and sister Lena and I went over to spend the day with grandma Wilson. We started from home and only had gone a short distance when we saw a great bear across the road before us. He was black all but his feet, and they were wight (white); we ran a race to see who would get there first to tell the story. When we reached the house grandma told us that the bear had been shot dead about five minutes before. We bid farewell to fright, and spent a pleasant day admiring the flowers and listening to the canary.
3. Garnet, opal, agate, pearl, diamond, topaz, ruby.
4. Greenland.
5. Shamrock.
6. E'en though scorn's malignant glances
Prove him poorest of his clan,
He's the noble who advances
Freedom and the cause of man.
7. Goldsmith, Shakespeare, Hemans, Hawthorne.
8. Though too oft by fashion's creatures
Work and workers may be blamed,
Commerce need not hide its features,
Industry is not ashamed.
9. Fair charity, be thou my nurse,
And be thy constant couch my breast.
10. Peach, pear, ash, pine.
11. A T O M
T A P E
O P A L
M E L T
12. Emporium.

John Chinaman had bought a watch which ran too slowly. He took it back to the jeweler, saying: "Watchee no good!" "What is the matter with it?" asked the jeweler. "Oh," said John, "Watchee too much by'm bye."

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

W. M. Head, Christena Hadcock, Hy. Reeve, Lena B. Scott, Annie Kelly, Ada Armand, Sarah M. Brett, Harry A. Woodward, Ann J. Phoenix, Geo. B. Van Blaricorn, Jas. Cowan, Mary McArthur, P. Lamb, Minnie Weldon, Robt. Wilson, Isabella McLeod, C. Gertie Heck, Edmund E. Stockton, Fred. D. Boss, Maggie E. Stenhouse, A. J. Taylor, J. W. Forbes, Robt. J. Risk, Ida Shipley, J. J. Smyth, Elmon M. Moyer, Neil McEwen, Addie E. Davidson, Annie B. S. Scott, Wm. S. Howell, Mary Marshall, Stephen Smith, Becca Lowry, Jas. Pater-son, Jabez H. Elliott, Sarah E. Miller, Belle Richardson, Katie Miller, Maggie F. Elliott, Ada Hagar, Annie B. Craig, Tiny Docker, Byron G. Bowerman, W. L. Sissons, Esther Louisa Ryan, Jessie M. Fox, Chas. H. Foster, Wm. Carney, May Newton, Henry W. D. Mar-tin, Edith M. Earle, Robt. Kerr, Georgia Smith, Carrie Christner, Jas. Watson, Lottie A. Boss, Ellen D. Tupper, Amelia E. Walker, Amelia L. Sammer, Mark Dearing, Agnes H. Frood, P. G. Boulton, Mabel Robson, Sarah Wessel, Will Thirlwall, Willis B. Bell, Thos. Armstrong, P. G. Boulton.

Little Ones' Column.

The Baby Mysteries.

BY GEORGE MACDONALD.

[We think that every mother will agree with us that this is one of the sweetest little gems in the language.]

Where did you come from, baby dear?
Out of the everywhere into here.

Where did you get them eyes of blue?
Out of the skies as I came through.

What makes the light in them sparkle and spin?
Some of the starry spikes left in.

Where did you get that little tear?
I found it waiting when I got here.

What makes your forehead so smooth and high?
A soft hand stroked it as I went by.

What makes your cheek like a warm white rose?
I saw something better than any one knows.

Whence that three-cornered smile of bliss?
Three angels gave me at once a kiss.

Where did you get this pearly ear?
God spoke, and it came out to hear.

Where did you get those arms and hands?
Love made itself into hooks and bands.

Feet, whence did you come, you darling things?
From the same box as the cherub's wings.

How did they all come just to be you?
God thought about me, and so I grew.

But how did you come to us, you dear?
God thought about you, and so I am here.

Merry Mike.

BY FLETA FORRESTER.

Merry Mike, from his door, bounded out to his play,
With his head in his hat, on a blustering day;
When the wind, of a sudden, came frolicking down,
And lifted Mike's hat from his little round crown.
"He-he!" said Mike, and he said "Ho-ho!
Do you call that funny, I'd like to know?"

Then he made up his mind to return to the house,
But the merry wind pushed itself under his blouse;
And it roared and it roared, as he puffed and he ran,
Till it just knocked over this queer little man.
"Ho-ho!" said Mike, and he said "He-he!
I'll get up again, Old Wind, you'll see!"

Then the wind, with a flurry of bluster and racket,
Went crowding and crowding right under his jacket;
And it lifted him off from his two little feet,
And it carried him bodily over the street.
Mike laughed "He-he!" and he laughed "Ho-ho!
Do you call this flying, I'd like to know?"

But the wind with its antics was plainly not through,
For fiercer and fiercer and fiercer it blew,
Till making one effort of fury intense
It carried Mike neatly right over a fence.
Mike said "Ho-ho!" and "He-he!" together,
"Do you think I am naught but a little hen's-feather?"

And he smiled and said, "Make yourself easy,
my friend—
Only keep your mind quiet, and things 'll soon mend!"
And he laughed "He-he!" and he laughed "Ho-ho!"
The wind is just playing, old cow, you know!
As he scampered off home, what above should he see

But the roof of a shed, that had lodged in a tree;
He met there a somewhat discouraged old cow,
That had blown thither too, though she failed to see how;
So he laughed and he laughed, till his sides they did ache,
For he said, "This is better nor wedding nor wake!"

And he roared "Ho-ho!" and he roared "He-he!"
For he was as tickled as tickled could be.
"That boy," say the terrified folks of the town,
"He would laugh just the same if the sky tumbled down!"
"Indeed, an' I would," fancied Mike, with a grin,
"For I might get a piece with a lot of stars in!"
And he chuckled "He-he!" and he chuckled "Ho-ho!"

The very idea delighted him so!
His father complained to the priest, "Now, I say,
Mike never stops laughing, by night or by day!"
"Let him laugh," spoke the priest; "he will change by and by,
And 't is better to laugh than to grumble or cry!
It's the way with the lad; let him laugh if he like;
And be glad you've a son that's as merry as Mike!"

Auctioning off the Baby.

What am I offered for Baby?
Dainty, dimpled, and sweet
From the curls above his forehead
To the beautiful rosy feet,
From the tips of the wee pink fingers
To the light of the clear brown eye,
What am I offered for Baby?
Who'll buy? who'll buy? who'll buy?

What am I offered for Baby?
"A shopful of sweets?" Ah, no!
That's too much beneath his value
Who is sweetest of all below!
The naughty, beautiful darling!
One kiss from his rosy mouth
Is better than all the dainties
Of East, or West, or South!

What am I offered for Baby?
"A pile of gold?" Ah, dear,
Your gold is too hard and heavy
To purchase my brightness here,

Would the treasures of all the mountains
Far in the wonderful lands,
Be worth the clinging and clasping,
Of these dear little peach-bloom hands?

So what am I offered for Baby?
"A rope of diamonds?" Nay,
If your brilliants were larger and brighter
Than stars in the Milky Way,
Would they ever be half so precious
As the light of those lustrous eyes,
Still full of the heavenly glory
They brought from beyond the skies?

Then what am I offered for Baby?
"A heart full of love and a kiss;"
Well, if anything ever could tempt me,
'T would be such an offer as this!
But how can I know that your loving
Is tender, and true, and divine
Enough to repay what I'm giving
In selling this sweetheart of mine?

So we will not sell the Baby!
Your gold and gems and stuff,
Were they ever so rare and precious
Would never be half enough!
For what would we care, my dearie,
What glory the world put on
If our beautiful darling were going;
If our beautiful darling were gone.

Humorous.

A very remarkable colored woman recently died in Virginia at an age exceeding a hundred years. Her unique character lies in the fact that she was not a servant of George Washing-ton.

"Oh, I'm so unhappy!" exclaimed the recently married Mrs. Cuddleup. "Why, my dear, I'm astonished to hear you say so. Is Mr. C. quarrel-some?" "No, you can't yet a quarrel out of him, and so we don't have a single make up."

At a church in a seacoast town in Massachu-sets the funeral of a prominent and highly re-spected citizen by the name of Knight took place, on which occasion, by a singular contre-temps, the choir sang as their first selection the usually fitting hymn, "There Will be No Night There." The effect as soprano, alto and tenor, successively took up, the refrain was well calculated to excite the risibles of those who had gathered in anything but a humorous spirit.

Judge Eastman, of Manchester, related at one time General Franklin Pierce was opposed to the Hon. Natt Hubbard in some cause in a New Hampshire court. The General's strong point was his influence over a jury, and in this particular case the eyes of every juryman were suffused with tears by his pathetic pleading. Mr. Hubbard, in a gruff voice, said in his reply, "Gentlemen of the jury, understand that I am not boring for water!" And this opening completely neutralized the effect of the General's eloquence.

A High Churchman and a Scotch Presbyterian had been at the same church. The former asked the latter if he did not like the introits. He replied: "I don't know what an introit is." Said the churchman: "But did you enjoy the anthem?" "No I did not enjoy it at all." "I am very sorry," said the churchman, "because it was used in the early church, in fact it was originally sung by David." "Ah!" said the Scotchman, "then that explains the Scriptures; I can understand now if David sang it at that time why Saul threw his javelin at him."

Commercial.

THE FARMER'S ADVOCATE OFFICE,
London, Ont., Aug 1, 1884.

Finer weather throughout Ontario for haying and harvest work could not be desired than we have had. The first half was very cool, which has been particularly favorable for the maturing of both the winter and spring wheats, and there is now every prospect of an abundant harvest. Hay has never been saved better than what has now been housed, and, on the whole, an abundant crop as well.

WHEAT.

The future prices of this article are not very promising, still there is nothing to be discouraged about. Things will right themselves by-and-by. The prospects of a great increase in wheat raising in India is thus discussed by Dr. W. W. Hunter, Secretary of Statistics in India, in giving evidence in regard to an important wheat growing district which the Indian Government propose to open up by means of railways: The district is 4,300 square miles in extent, and very fertile. At present 2,000,000 acres of this district are uncultivated, though much of the soil is fine black peat. Until recently it has been so out of the market for want of communication, that wheat was selling at 1s. 4d. per 112 lbs. in 1877, when Dr. Hunter was in the district. New wheat is selling in one of the outskirts where there is a railway at 200 per cent. higher, and in another outskirt at 6s. 8d. per 112 lbs. It is estimated that 220,000 tons of grain are produced in the district in excess of the consumption of the natives. As to the cost of producing wheat in India, Dr. Hunter says that at 16s. to 18s. per quarter the native cultivators would realize a profit, and at the latter price the area of cultivation would be largely extended; but to pay the grower 18s. per quarter for his wheat, the price realized in England must be 44s. per quarter, or 10s. more than the present average value of Indian wheat in London. The rate of exchange, says Mr. Robertson, formerly one of the managers of one of the Indian Exchange Banks, has been so low as to give the cultivators comparatively high prices in Indian money. He believes that the wheat trade would be checked by any cause which shall raise the rate of exchange value of the rupee; and the increase of railways, it is believed, would be such a cause. If the rate of exchange is raised, railway carriages must be diminished to compensate for the rise in exchange. The latest advices from Europe indicate that St. Petersburg and Odessa are increasing in shipments of wheat. British India is exporting from Calcutta, Kurrachee and Bombay, about one million bushels of wheat weekly. Exports from Australia are declining. All the world over the cultivators of the soil are generally suffering from the unequal rewards of their industry. Goods worth \$4 and produced in England by the labor of one man for two days, including cost perhaps of the raw material, are supposed sufficient to give in exchange for a year's labor on an acre of land in British India. The English farmer, at an average of 37s. to 38s. per 480 lbs. of wheat, and an average yield of 26 to 28 bushels per acre, does not receive for his disbursements for rent, tithes,

taxes, seed and labor, in the production, a sum sufficient to make both ends meet. As it is with the English farmer, so it is with the French and German farmer.

The New York Produce Exchange Reporter says:—"The rates of freight during the ensuing three months are likely to be of vital importance in shaping values and stimulating shipments. There is now no doubt that the exporting power of the country will be large, but it does not follow by any means that our shipments will be very liberal because we happen to have a large surplus, but the prices bid will control the movement from the interior very largely. It should not be forgotten that our domestic requirements will, after the 10th of August, have to be filled very largely from the new crop, and this aggregate is of far more importance than the public have any correct idea of. The first rush from the south and southwest may give us more than we can conveniently take care of, because the wheat is likely to be too soft to hold, and the first receipts may not be in a condition to ship with safety, so that the first month's experience may not prove any indication of the future course of the market."

The first load of new wheat for the season was sold by J. K. Montague, of Byron, price \$1.50 per 100, equal to 90 cents per bushel, to the firm of Robt. Pritchard & Co. The sample was Clawson. The second load was sold by D. Livingston, Westminster, variety Democrat, at \$1.70, equal to \$1.02 per bushel, to Geo. Phillips, quality very fine, and head of last year's sample. The third load was sold by J. Carmichael, of Lobo, Scott, to J. D. Saunby, \$1.72 per 100, say \$1.04 per bushel, extra good, 35 bushels to the acre. The yield of the Clawson was 22, and the Democrat 32 to the acre.

BEEF.

Timothy E. Eastman, the great operator in cattle in New York, is quoted, when speaking of the meat supply of England and France, to have said:—

"One cause of the depression of the beef market in Europe is the dullness of the iron trade in England. The people are not making enough to buy beef to eat, and they live on bread and cheese and beer. England is the great market, drawing for her supply of cattle on Germany, Russia, Spain, France and America. The business has been overdone. The quality has nothing to do with it; there has been simply too much of it. Good grass-fed cattle are now coming in from Ireland. Cattle will begin to come from the French provinces about August 1, and will fill the vacancy till December 1. Good beef is cheaper in England than it is here, and poor beef is dearer. Why? Because there the working people, the heavy consumers, buy the poorer parts of the carcass and by creating demand keep up the price. There is not much demand for the finest roasts, consequently they are cheap. Strange, eh? Here in America all of us will live well if we can't do anything else, and we want the best of everything. A poor American will buy the best beef he can get, so the poor parts go begging. I ship no beef to France; the tolls keep us out. We have to pay half a cent to get into the country and another cent to get into Paris, making a cent and a half a pound toll. I tried it for two years and gave it up. Cheap beef

does not effect the price of hides and leather. I have thoroughly investigated the manufacture of French calf-skins, a quality of leather we have never been able to procure in this country. The whole secret lies in the skinning. Here we use knives. In France they make a hole in the skin, insert the nose of a bellows, and actually blow the skin from the flesh. Consequently their skins never show a scratch and have no weak places. Of course there is a good deal in the tanning, but not all. England gets her mutton from Australia. It is frozen hard and arrives in perfect condition after trips of forty and even one hundred days."

CHEESE.

The upward turn of the market the past ten days has been a matter of surprise to a good many, and belies the most confident predictions of the trade. It also indicates that the calculations of the shrewdest may be wholly upset. Notwithstanding the heavy shipments and the large make, the market has developed a strong tone. Last week the shipments from New York and Montreal were 160,000 boxes, or 320,000 from these two ports within the past two weeks. Surely these shipments must have some effect.

July cheese in many sections are well sold up, and factory men are feeling pretty comfortable, knowing that when July cheese are sold the most anxious part of their season's duties are over.

BUTTER.

Seems to have very few friends, and those few are very cautious. Surely butter cannot come much lower. Should it do so the butter-makers might as well feed the whole milk to pigs and calves.

PRICES AT FARMERS' WAGONS.

Wheat, fall, per bushel.....	\$0 95 to \$1 05
Wheat, spring, do.....	1 00 1 10
Wheat, goose, do.....	0 75 0 90
Barley, do.....	0 55 0 60
Oats, do.....	0 45 0 48
Peas, do.....	0 72 0 75
Rye, do.....	0 00 0 00
Dressed hogs, per 100 lbs.....	8 25 8 50
Chickens, per pair.....	0 45 0 70
Ducks, do.....	0 70 1 00
Butter, pound rolls.....	0 18 0 18
Cheese.....	0 10 0 12
Eggs, fresh, per dozen.....	0 15 0 18
Potatoes, per bag.....	0 70 0 90
Apples, per bbl.....	0 15 0 20
Onions, green, per doz.....	0 75 1 25
Cabbage, per dozen.....	1 50 1 90
Peas, per bag.....	0 45 0 50
Turnips, per bag.....	0 15 0 20
Carrots, per doz.....	0 15 0 20
Beets, per doz.....	0 20 0 00
Parsnips, per peck.....	0 20 0 25
Radishes, per dozen.....	7 00 11 00
Hay, per ton.....	5 50 7 50
Straw, do.....

CHEESE MARKETS.

Utica, N. Y., July 28, 1884.

Transactions of the day are as follows: Two lots, 212 boxes, at 9c; 72 lots, 7,170 boxes, at 9c; 6 lots, 400 boxes, at 9c; 10 lots, 1,082 boxes, at 9c; 9 lots, 854 boxes, at 9c; one lot of small cheese, 150 boxes, at 10c; 4 lots, 687 boxes, at private terms. Sales, 10,555 boxes: lots, 687 boxes; total, 12,083 boxes. Ruling commissions, 1,528 boxes; total, 12,083 boxes. Ruling price, 9c. Transactions of corresponding day last year, 12,859 boxes; ruling price, 9c. Two years ago, 9,245 boxes, at a ruling of 10c.

Little Falls, July 28, 1884.

Prices were firm to-day and factorymen were disposed to hold unless concessions were made by buyers. They insisted that the New York market is well cleared out of stock, and that herds are shrinking very much, some estimating this shrinkage at one-third off from the flush yield. Buyers at last yielded slightly, and prices were advanced from 4c to 4c, the ruling price being 9c. At these figures nearly all the offerings were sold.

The transactions were as follows:

Lots.	Boxes.	Price.
7	3739
25	1,9929
72	5,4509
13	823cans
117	8,643
Farm dairy.....	950
	9,593

Woodstock, Ont., July 30.

Twelve factories offered 3,840 boxes of cheese of last half of July. Sales, 200 boxes at 10½c, and 600 boxes on private terms. Several factories were offered 10½c for the third week of July but declined, asking 10½c.

LIVE STOCK MARKETS.

East Buffalo, N. Y., July 30.

Receipts—Cattle, 697; hogs, 6,680; sheep, 2,000. Shipments—Cattle, 1,561; hogs, 3,555; sheep, 4,000. Cattle—Fresh arrivals all consigned through; the trade confined to those that had been held over; sales at about former prices; outlook a trifle better for good grades. Sheep and lambs—Fresh arrivals, light; market quite active, but at continued lower prices; bulk of supply, most of which had held over since Monday, were sold, but prospects bad. Hogs—Receipts—Sale hogs to be light, with favorable reports from Chicago; prices ruled about ten cents stronger; light to good Yorkers brought \$5 80, and 600 pigs \$5 20 to \$5 30; no good, medium, or heavy on sale.

BRITISH MARKETS BY WIRE.

Cattle 1c. Lower.

LIVERPOOL, July 28, 1884.

Heavy receipts of American and Canadian cattle caused a weaker feeling. The demand has been unequal to the supply, and prices are 1c lower than last week.

CATTLE.

	Cents @ lb.
Choice steers.....	14
Good steers.....	14
Medium steers.....	13
Inferior and bulls.....	7 @ 9

(These prices are for estimated dead weight; offal is not reckoned.)

SHEEP.

Arrivals of Canadian and States sheep moderate. The demand fair and market steady.

	Cents @ lb.
Best long woolled.....	15½ @ 16
Seconds.....	14½ @ 15
Merinos.....	13½ @ 14
Inferior and rams.....	8 @ 9

(These prices are for estimated dead weight; offal is not reckoned.)

Wise Words.

There can not live a more unhappy creature than an ill-natured old man, who is neither capable of receiving pleasures, nor sensible of doing them to others.—*Sir W. Temple.*

Ignore the wrongs you receive, and think over the good that has been or yet may be, and evils will dwindle into nothingness. Nothing so contributes to the growth of evils as to brood over them in our thoughts.

Some one saying to the famous Marquis Spinola that a distinguished General had died of having nothing to do, he replied, "Upon my word, that is enough to kill anybody."

The poor fellow who is not certain of what he can do or wants to do; not certain that the world wants him or his work, you will find, whatever his natural powers, in a back street or cheap boarding house, cursing his bad luck.

James Freeman Clark: "We waste our time doing too many things, reading too many books, seeing too many people, talking too much. Therefore we do nothing well, read nothing thoroughly, know no one really, say nothing that is worth hearing."

A good part of duty is expressed in the simple imperative "remember." In the hurry of daily life there are hundreds of things left undone which ought to be done; and in the majority of cases it is not wilful neglect, but forgetful neglect, which is to blame.

Philosophy seems to open the mind, and to give it eyes within and without. It subjects all nature to our command, and carries our conception up to the Creator. The mind is liberalized by every such study, and without these, it can never become great or tasteful.

OUR FALL CAMPAIGN!

SELECTIONS FROM OUR PREMIUM LIST.

Grand Wheat Prizes.

For One New Subscriber:

THE CHOICE OF

One-half pound of the **Valley Wheat**, just introduced this year for the first time to you; has been tried by leading seedsmen in Canada and the U. S. A., and pronounced a most promising variety for our farmers, and deserving of a good trial; or,

One pound of the **Martin Amber**, the leading fall wheat of this country; see full accounts of it in this issue; 60 bushels to the acre from one bushel of seed; has, it is said, been grown this season; or,

One pound of the **Landreth**, or **Bonnell**; for description and cuts of this new, promising variety, see page 235. The originators claim for this wheat that it is less liable to rust and very prolific. Give it a good test. This variety has succeeded very well in the county of York; or,

Two pound of the **Democrat**. This favorite wheat has grown in popularity, and needs no praise after a trial. This season it has probably excelled all other varieties in withstanding the midge, and its yield has been very good; or,

The **Farmer's Advocate Test Package**, for \$4, comprising samples of the following varieties:—Valley, Martin Amber, Red Russian, Hybrid Mediterranean, Landreth, Canadian Amber, Oster's Amber, Lancaster Red, and Tuscan Red.

Some other new varieties may be added or some omitted, but nine or ten varieties will be mailed as promised. Just what every farmer wants—enough to test and to govern his further sowing.

STRAWBERRY PLANTS.

Two plants, **Prince of Berries**, said to be the latest and best of the many excellent varieties originated by Mr. Durand, of New Jersey. (See cut and description in this issue.) or,

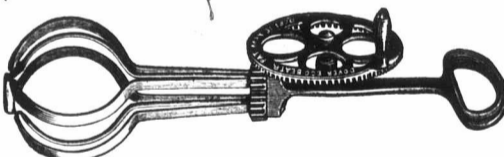
Two plants, **Daniel Boone**. This plant has grown in favor greatly during the past season, and bids fair to be in great demand, both as to flavor, productiveness and keeping qualities.

FLOWER SEEDS.

New German Pansies—one packet of about 50 seeds of these lovely flowers. The plants are choice and exceedingly popular. The seeds here offered embrace eighty of the most strikingly beautiful colors, and are from the best growers in Germany. August and September are excellent months to sow for early spring flowers.

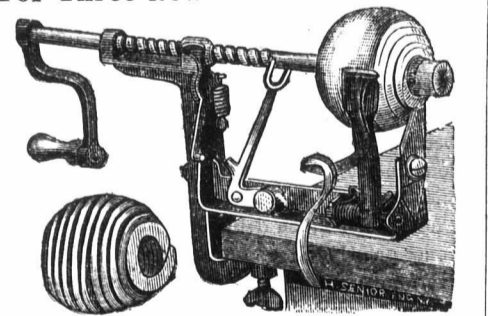
N. B.—We are not in the seed business. We procure what we give for premiums from reliable seedsmen, but cannot guarantee any variety offered as pure and true to name.

For Two New Subscribers:



Dover's Egg Beater—Beats the whites of the eggs thoroughly in 10 seconds. The beating floats revolve on two centres one inch apart, and curiously interlace each other. No joints or rivets to get loose. Cleaned instantly. A woman and her Dover Beater cannot be separated.

For Three New Subscribers:



The **White Mountain Apple Parer**—This machine does its work economically and quickly, leaving the fruit ready for drying, &c. This parer is the best and most serviceable one which we know of, and can strongly recommend it to every one. Per express at receiver's charges, or

The **White Mountain Potato Parer**—is said to be not only the best one made, but the only one manufactured which will pare a potato better than it can be done by hand, taking off a thinner paring from every shape or kind of potato, but will go into and clean out the eyes. Per express at receiver's charges.

The above premiums, except otherwise stated, will be sent per mail at the proper season. These prizes are given to our subscribers for obtaining new ones, and are in no case given to the new subscribers.

The annual subscription (\$1.00) must always accompany the new name to win a prize. Sample copies, subscription lists, posters, &c., mailed free on application. Address,

The FARMER'S ADVOCATE, London, Ont.

Interfering Horses.

Many horses are in the habit of striking with one leg against another; and much of ingenuity has been exercised to provide a remedy for the troublesome practice. Both fore and hind legs are subject to it, the latter perhaps most frequently; but in them it is confined to the fetlock joint, whereas in the fore legs, the horse may hit either the fetlock, the leg just above the pastern, or just under the knee, where it is called a speedy cut, from its occurring chiefly in fast action.

It is desirable, before applying a remedy, to ascertain, if possible, the cause, and the part which strikes; whether the shoe or the foot, and, if the latter, what part of it. Many horses strike from weakness, and cease to do so when they gain strength and condition. This is more particularly the case with young horses; others cut from a faulty conformation of the limbs, which are sometimes too close to each other; again the toe is turned too much out, or in. When turned in, the strike is usually just under the knee.

The object to be kept in view, in shoeing such horses, must be to remedy the faulty action, and to remove, if possible, the part which strikes, which is generally that portion of the foot between the toe and the inside quarter—sometimes the inside quarter itself, but very rarely the heels of the shoe. If the horse turns his toe in, in all probability he wears the inside of the shoe most; if so, it should be made much thicker than the outside; if the contrary, the outside heel should be the thicker. The shoe should be leveled off on the inside quarter, which should also be free from nails.

In the hind legs we often find a three-quarter shoe will prevent striking, when other plans fail, for here the striking part is not so far forward as in the fore legs, so that the removal of the iron altogether, from the inside quarter, will often accomplish the aim. It sometimes happens that no plan will prevent interfering, and then the only resource is the boot or the pad.—*N. H. Paaron, V.S., in Michigan Farmer.*

Now cull out spare cockerels.

An English court lately decided the dishorning of cattle to be an unwarrantable cruelty, punishable by statute.

Don't destroy bees' nests. Bees are agents for the fertilization of plants, and they increase the yield of clover seed.

At this time, when cut flowers fade so soon, it is well to know that if a small bit of the stem is cut off and the end immersed in very hot water, the flower will frequently revive and resume its beauty. Colored flowers are more easily rejuvenated than white ones, which are apt to turn yellow. For preserving flowers in water, finely pulverized charcoal should be put into the vase at this season. Where vines are growing in water, charcoal will prevent foul odors from the standing water.

Special Notices.

We have laid on our table a very valuable work entitled "Farm Account Book," by Alex. Jemmett. This work is published in England. The author has received the most complimentary notices from the agricultural press of England, and we can add our mite in favor of the utility and advantage to farmers possessing and keeping up with regularity and accuracy such a book. The book is complete in every department. Address, F. G. Jemmett, Richmond West, Ont., for circular, etc.

Higher Education of Women.

Every Canadian must heartily rejoice at the great interest now happily manifest in the higher education of Canadian girls. Not only are the excellent public and high schools open to them, but within the past few years a College, first-class in all its equipments, has inaugurated a very successful career in the city of St. Thomas.

Alma College possesses a fine location, charming grounds, and is beautifully and very comfortably furnished. It fact it has all the modern improvements to be found in first-class hotels. With an excellent faculty, low rates, and a very large attendance, this young and flourishing institution seems destined to rapidly take the leading place in the work of the higher education of Canadian women. Any of our readers who may be specially interested can find in our advertising columns a fine cut of the building, as well as necessary information concerning the school. (Adv't.)

We would remind our many friends who wish us success, that there is hardly a post office in the land where a club of five or more cannot be formed by showing a copy of the paper to those interested in agriculture, and that we will gladly mail a specimen copy free to any farmer or gardener whose address is sent us.

(Continued on next page.)

NEW ADVERTISEMENTS.**ADVERTISING RATES.**

The regular rate for ordinary advertisements is 25c. per line, or \$3 per inch, nonpariel, and special contracts for definite time and space made on application.

Advertisements unaccompanied by specific instruction inserted until ordered out, and charged at regular rates.

The FARMER'S ADVOCATE is the unrivalled advertising medium to reach the farmers of Canada, exceeding in circulation the combined issues of all the other agricultural publications in the Dominion. Send for advertising circular and an estimate.

SPECIAL NOTICE.

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

MESSRS. BROOKS & COMPANY,
2 Railway Approach, London Bridge,
LONDON, ENGLAND.

—WHOLESALE—

Apple Merchants and Commission Salesmen

desire to correspond with a few Canadian apple growers and shippers as to the prospects of their this year's crop, when they will be pleased to forward their opinion as to the probabilities of the English demand, prices, &c., and give full information as to the European crop generally.

224-b

PUBLIC AUCTION

—ON—

WEDNESDAY, SEPTEMBER 10, 1884

(Sale at 1 o'clock sharp) at

LITTLE FARNHAM FARM,
Arkell P. O., Guelph Station, Ont.

50 COTSWOLD SHEEP, 25 OXFORD-DOWN SHEEP,
12 PURE-BRED and HIGH-GRADE SHORTHORN CATTLE
PURE-BRED JERSEY BULL and BERKSHIRE PIGS.

The sheep are either imported or bred from imported stock. My flocks during the last three years have been awarded at leading exhibitions **Seventy (70) First Prizes, Thirty-five (35) Seconds, Twenty-two (22) Thirds, One Silver Medal and Ten (10) Diplomas.**

Catalogues with full particulars of stock and terms of sale on application to

HENRY ARKELL,
224-b Arkell P. O., near Guelph, Ont.

Dominion Exhibition

SEPTEMBER 5th to 13th.

MONTREAL, 1884.

\$25,000.00 in PREMIUMS

Agricultural and Industrial.

Ample grounds and magnificent buildings for the display of Live Stock, Manufactured Articles, Agricultural Implements and Machinery in motion.

Grand International Bench Show of Dogs.

The Exhibition will be in full operation from Friday, September 5th, to Saturday, the 13th, 1884, and will be open till 10 p.m. each day.

Reduced rates are offered by all the principal Railway and Steamboat Companies.

For all information apply to the undersigned,

S. C. STEVENSON, } Joint
GEO. LECLERE, } Secretaries,
76 St. Gabriel Street.

224-a

THE GREAT Industrial Fair and Semi-Centennial Exposition

—OF—

Live Stock, Poultry, Dairy, Agricultural and Horticultural Products, Implements and Manufactures of all kinds,

TORONTO, SEPTEMBER 10TH TO 20TH, 1884

The Largest Prize List in the Dominion.

The programme of special features and novelties will be the best yet presented by the Association.

Prize Lists and Entry Forms can be obtained from the Secretaries of all Agricultural Societies and Mechanics' Institutes, or they will be sent anywhere on application by post-card to the Secretary at Toronto.

Cheap Rates and Excursions on all Railways

The Best Time to Visit the City of Toronto.

WAIT FOR IT.

J. J. WITHROW, H. J. HILL,
President. Manager and Secretary.
222 c Toronto.

Western Fair

1884.

CANADA'S GREAT EXHIBITION
AND INDUSTRIAL ENTERPRISE.

LONDON, CAN.

SEPTEMBER 22, 23, 24, 25, 26

\$17,000.00 in PRIZES

\$2,000.00 in excess of 1883.

\$1,049.00 in specials by friends of the Western Fair.

OPEN TO THE WORLD!

The Western Fair for 1884 will far surpass all its predecessors. The prizes are larger and the new features and novelties to be introduced will make it the most attractive exhibition ever held in Canada. Wait for it.

Write to the Secretary for Prize Lists, Posters, Programmes or any information required.

E. R. ROBINSON, GEO. MCBROOM,
224-b President. Secretary.

GRAND DOMINION

—AND—

39TH PROVINCIAL EXHIBITION.

Under the auspices of the

AGRICULTURAL AND ARTS ASSOCIATION OF ONTARIO,

—TO BE HELD AT—

OTTAWA.

—ON THE—

22nd to 27th Sept., 1884.

\$23,000 Dollars in Premiums and Dominion Medals.

Entries must be made with the Secretary, at Toronto, on or before the undermentioned dates, viz.:

Horses, Cattle, Sheep, Swine, Poultry, Agricultural Implements, on or before August 23rd.

Grain, Field Roots and other Farm Products, Machinery and Manufactures generally, on or before August 30th.

Horticultural Products, Ladies' Work, Fine Arts, etc., on or before September 6th.

Prize lists and blank forms for making the entries upon can be obtained of the Secretaries of all Agricultural and Horticultural Societies and Mechanics' Institutes throughout the Province and from the Secretary

HENRY WADE,

223 b Agricultural Hall, Toronto.

ACME

STEAM HEAT

EVAPORATOR

—FOR—

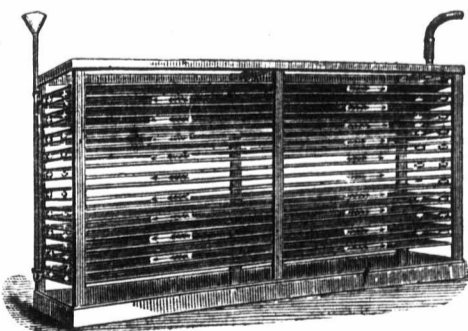
DRYING FRUITS AND VEGETABLES.

Has twice the capacity for its size of any machine in the market, and is warranted to use less than one-half the fuel used by any other drying machine. Is used for drying Straw Board, Fish, Confectioneries &c. Send for Catalogue and Price List.

J. J. BLACKMORE & CO.,

224-c

ST. THOMAS, ONT



The British American Business College TORONTO,

Has turned out more **FIRST-CLASS BOOK-KEEPERS** and **ACCOUNTANTS** than any other College in the Dominion. It is endorsed by nearly all the prominent Bankers and Business Men in Canada.

OPINIONS OF THE PRESS.

"This Institution is the oldest of its kind in the Dominion, and has always enjoyed the reputation of imparting a thorough and sound business training."—*Globe*, September 2, 1882.

"This Institution is deservedly popular, and no doubt will, as in past years, secure a large attendance."—*Mail*, September 4, 1882.

"It has a large and experienced faculty who impart thorough instruction in the practical forms of business. The College has sent out hundreds of young men who occupy responsible positions in the country."—*World*, September 11, 1882.

"To the young man contemplating a business career this School offers every opportunity for acquiring a correct and adequate knowledge of mercantile usages."—*The Monetary Times*.

For Descriptive Pamphlet address the Secretary, Toronto.

224-d

Spencerian
BUSINESS COLLEGE,
Detroit, Mich., U.S.A.

"SPENCERIAN" is the acknowledged American standard of Penmanship. One of its authors is associate proprietor of the Detroit College.

YOUNG MEN of Canada desiring a knowledge of the modern methods of doing business in the States or a start in business there, should attend this College. It is one of the largest and best on the continent, and is thorough and complete in every department.

SHORTHAND, PENMANSHIP AND TELEGRAPHY TAUGHT AS SPECIALTIES.

The actual **Business Practice Course** is unexcelled. Five Departments are maintained. The Faculty is composed of nine competent and experienced instructors. Rooms are pleasant and elegantly furnished. College is located in the Board of Trade building, in the business centre of the city. There are no vacations, and students may enter at any time. Write for illustrated circular. Address
Mention *Farmer's Advocate*. 224-c **SPENCER, FELTON & LOOMIS, PROPRIETORS.**



ALMA LADIES' COLLEGE

St. Thomas, Ont.

BUILDINGS AND FURNISHINGS THE FINEST IN CANADA

RE-OPENS SEPTEMBER 4th, 1884.

Gives thorough instruction in **Literature, Music, Fine Arts and Commercial Course.**

Board, Room, Light, Laundry and Tuition cost only from \$38 to \$45 per term, according to department. The same with Music, Drawing and Perspective, only \$190 per year in advance. The college has 15 thoroughly qualified teachers, and grants certificates and diplomas to successful candidates. For Calendar, &c., address
224 PRINCIPAL AUSTIN, B. D.

WESLEYAN LADIES' COLLEGE HAMILTON, CANADA.

The oldest and the largest Ladies' College in the Dominion. Has over 150 graduates. Faculty, five gentlemen and twelve ladies. The building cost \$110,000, and has over 150 rooms. Music and Art specialties.

Will re-open on September 2nd.

Address the Principal,
224-a A. BURNS, D.D., LL.D.

BRANTFORD LADIES' COLLEGE AND CONSERVATORY OF MUSIC.

Has the best University record of any Ladies' College in Canada. Thirty-four of its students have been successful in the Toronto University local examinations, nearly all taking honors. There are two distinct departments in **Music**, one for **Instrumental Music**, the other for **Voice Culture**, each having its own Professor with assistants. The Art Department is still under the immediate direction of Henry Martin, A.R.S.A. Rooms well-furnished and home-like. Fees moderate for advantages offered. For Calendar address
T. M. MACINTYRE, M.A., LL.B., Principal.
College re-opens September 3rd, 1884. 224-a

BUSINESS EDUCATION!

HAMILTON COMMERCIAL COLLEGE.

Corner King and James Streets.
(Over Federal Bank.)

THIS INSTITUTION offers special terms and advantages to

YOUNG GENTLEMEN AND LADIES

desiring a thorough, practical Business Education. Its course of instruction embraces all the branches necessary to complete commercial training, and is second to none. Its teachers are well qualified for their work, and the number of pupils is limited to what can be properly attended to. Everything connected with the school is the newest and best. No old system has any place in its curriculum.

The location of the College is in the best spot in the city of Hamilton, overlooking the Gore Park. The rooms are large, airy and newly furnished throughout. It will pay to call before applying elsewhere.

Send for circular.

M. L. RATTRAY,

PRINCIPAL.

223-f

Please Mention this Paper.

DEREDICK'S HAY PRESSES.



Manufactory at 90 College Street, Montreal, P. Q.
Address for circular P. K. DEDERICK & CO., Albany, N.Y.

Notices.

Continued.

Several excellent Colleges have advertisements in another column of this issue. To our readers who are contemplating a fall business or musical course, or attendance at any of our most efficient Ladies' Colleges, we would say, Don't fail to write for circulars of those advertised before final decision.

It will be seen by advertisement in another column that the Industrial Fair and Semi-Centennial Exposition will open in Toronto Sept. 10, and continue till the 20th. The programme presents many special attractions, and the management have left nothing undone to insure the success of the Exhibition.

The 39th Provincial Exhibition, under the auspices of the Agricultural and Arts Association, will be held at Ottawa Sept. 22nd-27th. The prize list includes \$23,000 in premiums and medals. The managers are making every effort to make the exhibition instructive and attractive. See advertisement as to particulars.

SUCCESSFUL TRIAL.—On the 15th ult., the maiden trial of a new self-binder and harvester, from the factory of Messrs. Frost & Wood, the well known implement makers, of Smith's Falls, Ont., took place on the farm of Mr. John Clark, of the 4th concession of Beckwith. The results seem to have been most satisfactory, although the trial was made under difficult circumstances. Mr. Clark was so well satisfied with the work done that he at once became a purchaser.

Public interest in the Western Fair is increasing. The prize list of the coming exhibition shows a considerable increase over last year's; and the amounts subscribed by friends are three times greater. A number of new sections has been added to the Agricultural Products Department, and two new classes have been added to the cattle department, viz., Holsteins and Canadian bred Shorthorns. A new class has been created for honey and apiary supplies, and many other new attractions have been added. Special attention has been devoted to the Ladies' Department, thirteen new sections having been opened, and there is an increase of premiums. The number of entries so far received has exceeded those at any previous fair. See advertisement.

SPENCERIAN BUSINESS COLLEGE.—The time will shortly arrive when some will be contemplating sending their sons or daughters to some of the finishing educational establishments. In this issue you find an American institution soliciting your patronage. On a late visit to Detroit, Mich., we called at the Spencerian Business College, and were kindly shown through the different rooms. The scholars were numerous and each department was under a special instructor. Everything appeared in the best of order. Many Canadians have already passed through a course in this College, and as far as we can learn, have been highly satisfied with the education received. There are sometimes many advantages gained by going from home to receive a good finishing business education.

See Stock Notes, page 252.

COCKSHUTT PLOW COMPANY (Limited)

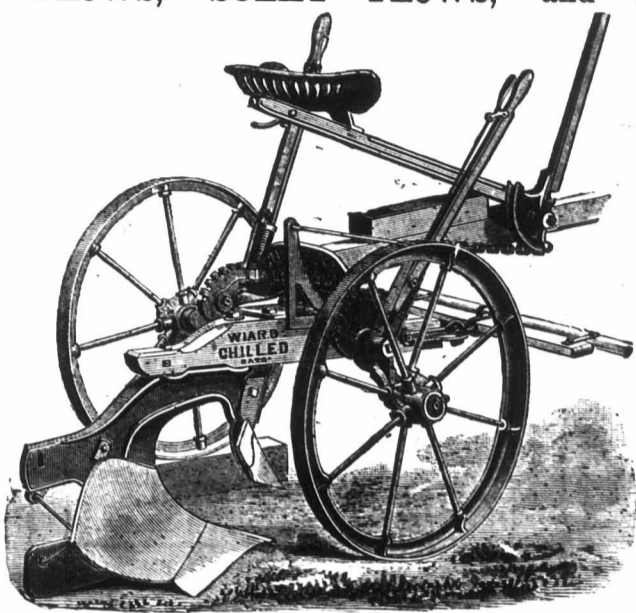
MANUFACTURERS OF

CHILLED and STEEL PLOWS, SULKY PLOWS, and PRAIRIE BREAKERS.

This Cut represents our New Wiard Sulky Plow for two horses, with flanged furrow wheel, which gauges not only the depth but the width of the furrow. It plows a straight and even furrow, and will start or finish a land equal to a Walking Plow, with far less skill required in handling. This Plow was patented in 1883, and we have secured the sole and only right to manufacture it for the Dominion of Canada.

We have now nearly 300 Sulky Plows sold in Canada of our own manufacture, all giving first-class satisfaction.

224-a



We are the Pioneer Sulky Plow makers of the Dominion.

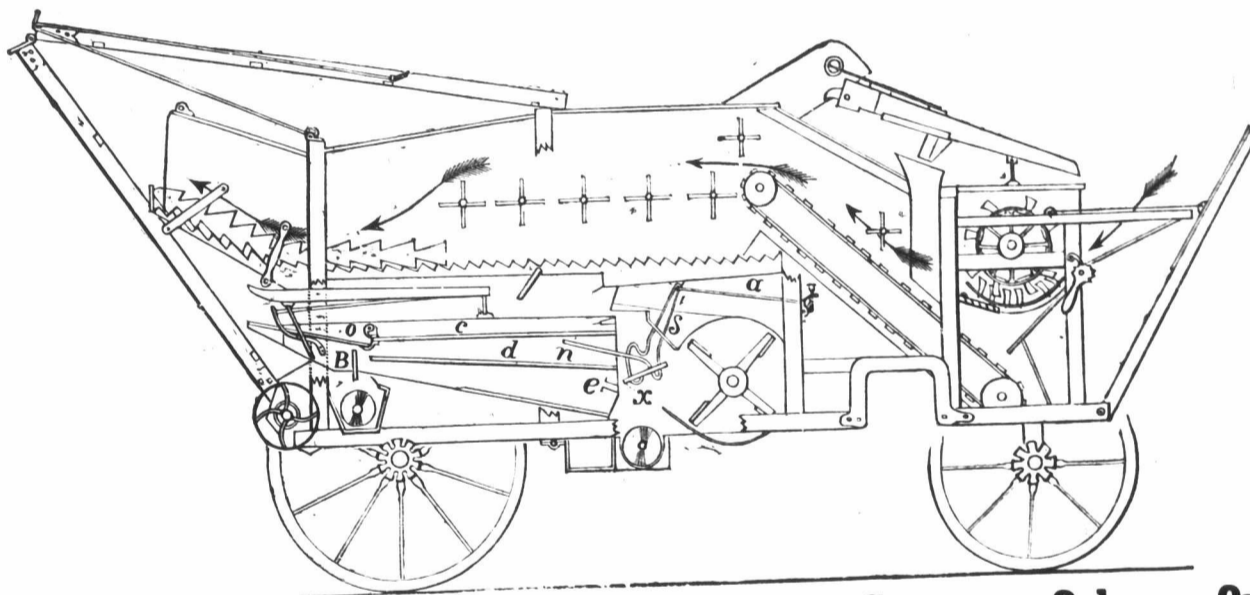
We would also refer to our New "Economist" Walking Plow, with patent reversible wing and point, and with steel beam, an entirely new feature in the plow trade. Every farmer that looks at it is pleased with it.

Send for a Plow on trial for your fall stubble plowing.

Send for Circulars to
COCKSHUTT PLOW Co.,
(Limited.)
BRANTFORD, ONT.

SECTIONAL VIEW OF

Miller's "New Model" Vibrating Thresher



Manufactured by the Joseph Hall Manufacturing Company, Oshawa, Ontario.

THE MOST PERFECT THRESHER, THE MOST PERFECT SEPARATOR, THE MOST PERFECT CLEANER EVER OFFERED TO THE PUBLIC. THE ONLY TRUE GRAIN SAVER

JOHN DRYDEN, M. P. P., on the "NEW MODEL." (From the "Ontario Reformer," December 21st, 1883.)

Our readers are, probably, all aware that John Dryden, M. P. P., President of the Canadian Shorthorn Breeders' Association, occupies one of the finest farms in the Dominion of Canada, and is one of the best farmers. He cultivates something over five hundred acres of land, and there is scarcely an acre but what is in a high state of cultivation, and the whole farm is free from all weeds or plants which are injurious to crops. Not only does he own one of the finest and best tilled farms in the country, but his stock throughout, whether horses, cattle, or sheep, are of the very best breeds, and all of them fine animals. In every department Mr. Dryden looks out for the best, whether it is in the line of stock, machinery or seed grains. He and his neighbor, Mr. Samuel Holman, purchased for their own use, this year, a New Model Vibrating Threshing machine of the Hall Company, and Mr. Dryden's opinion we give below. Every one who is acquainted with him knows that he would not put his name to any statement which is not correct in every particular; therefore his opinion of the New Model is of great value to those who desire to purchase a threshing machine: Brooklin, Ontario County, Dec. 13, 1883.

The Joseph Hall Manufacturing Company, Oshawa,

We are highly delighted with the New Model Vibrator purchased from you this season. It runs smooth and easy; threshes perfectly; separates thoroughly; and the fanning mill does its work so completely that it cannot be excelled. It is just the machine for the farmers to buy because it is easy to control. It is comparatively free from dust, there can be no waste of grain, and it is bound to do good work under every circumstance. We heartily congratulate you on the introduction of so complete a separator, a great boon both to threshers and farmers.

222-c

Very truly yours,

JOHN DRYDEN, M. P. P.
SAMUEL HOLMAN.

HAVE YOU A FRIEND WHO WANTS TO GET INTO a good paying business, or would you prefer to go in and win yourself. Agents and farmers will find this an easy way to make money. Write for particulars, enclosing 3c. stamp; don't delay. Address, **JAMES LAUT,** 221 Yonge Street, Toronto, Ont.

219-y

FRUIT BASKETS!

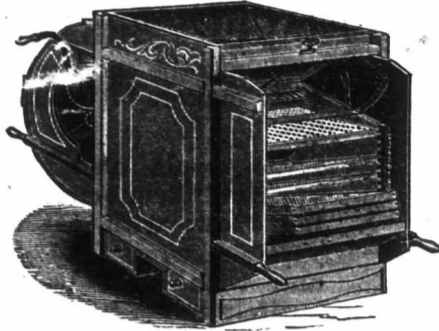
Best Strawberry, Peach and Grape Baskets at bottom prices at the Grimsby Basket Factory. Address 221-d W. W. CROSS, Grimsby P. O., Ont.



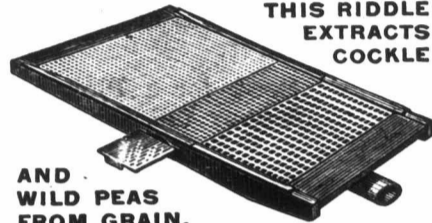
J. N. ANDERSON, M. D.
M. C. P. S. Ont.—Eye and Ear Surgeon, 34 James St. Hamilton, Ont. Dr. Anderson gives exclusive attention to the treatment of the various diseases of the EYE and EAR.
CROSS EYES STRAIGHTENED.

Campbell's Riddle for Extracting Cockle and Wild Peas from Wheat.

6000 OF CAMPBELL'S MILLS NOW IN USE.



THIS RIDDLE
EXTRACTS
COCKLE



AND
WILD PEAS
FROM GRAIN.

The accompanying cuts represent the top view of Campbell's Patented Riddle for extracting cockle and wild peas from grain.

You will notice that there are three different sizes of perforated zinc on the top over which the grain passes. The size of the holes where the grain runs over first, is $\frac{1}{2}$ of an inch, and the next size is some larger and by means of a Sheet Iron Slide, you can either close the middle holes or leave them open, according to size of cockle or wild peas you wish to take out.

The holes in the piece furthest out are $\frac{1}{4}$ of an inch, and they let the clean grain through, down on the screen, just the same as an ordinary riddle.

This Riddle works grand, and farmers who desire to have clean grain to sell and clean seed to sow, will be well satisfied with it.

It will be in all of my Mills sent out after this date. The Mill is also fitted with Screens and Riddles for cleaning every kind of grain that grows.

The Mill has proved itself to be first-class in every respect, and farmers who favor me with an order will get a Mill that will give them every satisfaction, and it is second to none in the market.

GEARING INSIDE. SCREENS and RIDDLES ADJUST-
ABLE TO ANY PITCH.

Send for circular and prices to

MANSON CAMPBELL,

Box 106, CHATEAU.



OLDS' PATENT 1, 2 AND 3 HORSE-POWERS AND SEPARATORS

The leading Threshing Machine in the Dominion. Will do almost double the work of the old style mills.

Send for Pamphlet to B. W. OLDS & CO., 174 Mullins St., Point St. Charles, Montreal.

Or to LARMONTH & SONS, General Agents, 33 College St., Montreal.

Or to W. S. CASSON, General Agents for Frost & Wood, Truro, Nova Scotia.

Our Powers, formerly made at St. Albans, are used to operate the Laval Cream Separator.

A USEFUL BOOK! LADIES' MANUAL OF FANCY WORK.

A NEW BOOK, giving plain directions for Artistic Embroidery, Lace Work, Knitting, Tatting, Crochet Work, Net Work and all kinds of fancy Needle Work. This VALUABLE BOOK is beautifully printed on fine tinted paper, has a handsome cover, and contains over

400 ILLUSTRATIONS,

Comprising designs for Monograms, Initials, Knit Edgings, Cross Stitch Patterns, Point Russe, Berlin and Shetland Wool designs, Applique designs, Kate Greenaway designs for Doyleys, etc., Handkerchief Borders, Macramé Lace work, Holbein work, Java Canvas work, Worsted Fringes, Turkish Rugs, Toilet Cushions, Footstools, Hat Racks, Pin Cushions, Ottomans, Work Baskets, Pen Wipers, Bed-quilts, Lambrequins, Work Bags, Book Covers, Wood Boxes, Door Panels, Scrap Baskets, Sofa Coverlets, Toilet Bottle Cases, Table top Patterns, Folding Screens, Church Font Decorations, Sofa Cushions, Music Portfolios, Slipper Patterns, Persian Rugs, Wall



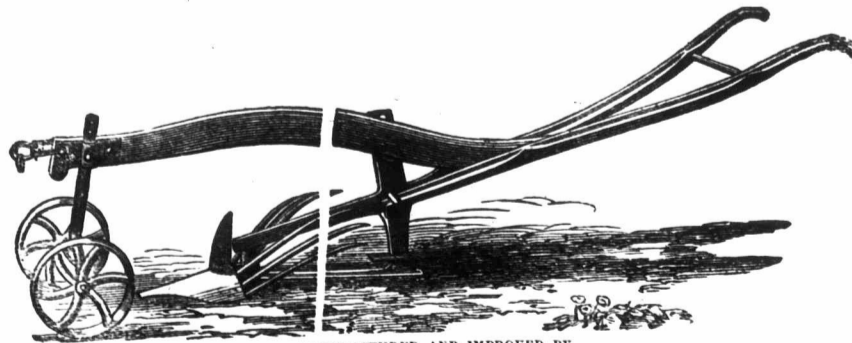
Pockets, carriage Rugs, Chair back Covers, Towel Racks, Perfume Sachets, Tidy designs, Flower Pot Covers, Lamp Shades, Needle cases, Watch Cases, Fancy Work Bags, Catch-alls, Match Safes, Eye Glass Pockets, Collar Boxes, Chair Bolsters, Umbrella Cases, School Bags, Patch work designs, Coin Purses, Designs for Tricot and Burlaps, Wood Baskets, Commodors, Bibs, Glove Cases, Air Castles, Gypsy Tables, Hair Receivers, Paper Weights, Table Mats, Night-dress Cases, Shoe Bags, Needle Books, Jewel Boxes, Door Mats, Knitted Jackets, Bottle Cases, Paper Racks, Pillow Shams, Hair Pin holders, Floss Winders, Messic Window Shades, Book Marks, and every design in fancy work a lady can desire, to the number of over 400.

Plain directions with each design.—A Reliable book for daily reference.

Jenny June in her preface to this book, says: "The present volume does not pretend to furnish the theory or practice of the highest Needle work art, but it does aim to supply within its compass a greater variety of excellent designs—every one of which is useful, for dress or household decoration—than have ever before been gathered within the leaves of one manual."

Only 50 cents per mail, post-paid, or sent free to any subscriber who send in one new name, with \$1.00 Address FARMER'S ADVOCATE, London, Ont.

WALMSLEY'S PATENT POTATO DIGGER!



MANUFACTURED AND IMPROVED BY

R. DENNIS, London, Ontario.

This Potato Digger gives satisfaction to purchasers. For particulars address above. Price \$16 at shop or placed on board cars at London.

Stock Notes.

The trotting stallion, Confederate Chief, owned by Wm. Hendrie Esq., of Hamilton, has made a great season.

Mr. J. R. Scatcherd, of Rebecca P. O., Ont., has now in the Quarantine 10 head of Holsteins, 1 bull and 9 females, to add to his herd in Middlesex.

The bay mare, "Chipola," the property of Mr. J. P. Dawes, of Lachine, P. Q., which has been so successful in the United States, fell in the steeple chase races at Monmouth Park last month, and was killed.

Our readers, especially stock raisers, will note the public sale of sheep, cattle and pigs, by Henry Arkell, on the 10th Sept. The stock are good and well worthy of a large attendance at the sale by our enterprising farmers.

John White, the well known breeder of Milton, Ont., has suffered a very severe loss in the death of his valuable brood mare, "Nellie Lyall." Mr. White has been particularly unfortunate of late, having lost five thoroughbreds within the past year.

Mr. J. C. Cooper, of Marksville, St. Joseph's Island, purchased from Joseph C. Hughes, of Iderton, a Shorthorn bull; also a Shropshire ram from G. Nixon, of Hyde Park. These, we understand, are the first pure bred animals of the above classes that have been introduced on the Island.

Messrs. A. Fanson & Son, of Toronto, Ont., have a colt by True Blue out of Alice Conn, that, like the celebrated stallion George Wilkes, is being brought up partly on cow's milk, which is made to assimilate with the mare's milk by adding a little brown sugar. The colt is thriving finely.

The imported stock, including two Shorthorn bulls, a cow, and three heifers, with the Hereford bull, Cronkhill 8th, and five heifers, the property of Messrs. Green Bros., the Glen Stock Farm, Innerkip, Ont., have arrived at their farm in good order and condition. They inform us they shall be happy to show them at any time.

The Geary Bros., of Bli-bro Farm, near London, Ont., recently sold to E. S. Butler, of Ridgeway, Ohio, the celebrated Shropshire ram, "Acme," imported from the flock of Mr. Edward Instone, of Hereford, England. "Acme" is a celebrated prize winner, weighs 370 lbs., and was sold for the handsome sum of \$450. Sheep like this pay.

Messrs. Grand & Walsh, of the Repository, Toronto, Ont., have had a most successful season. They are now arranging for a grand combination sale of thorough-bred horses, hunters, trotters, roadsters, and cattle, to be held the first week in October. Buyers are expected to be present from all parts of America, and even from England. Breeders having prize animals to dispose of will have here a good opportunity to secure good prices for their stock.

(Continued on page 254.)

The well-known seedsmen, John A. Bruce & Co., of Hamilton Ont., state:—"From a long experience in advertising, we are convinced that there is no better channel in use for placing before the farmer those articles which are a real benefit to every tiller of the soil, in whatever portion of the Dominion his lot may be cast, than the FARMER'S ADVOCATE."

SCREENS

Ready-framed to Fit any sized

DOOR or WINDOW

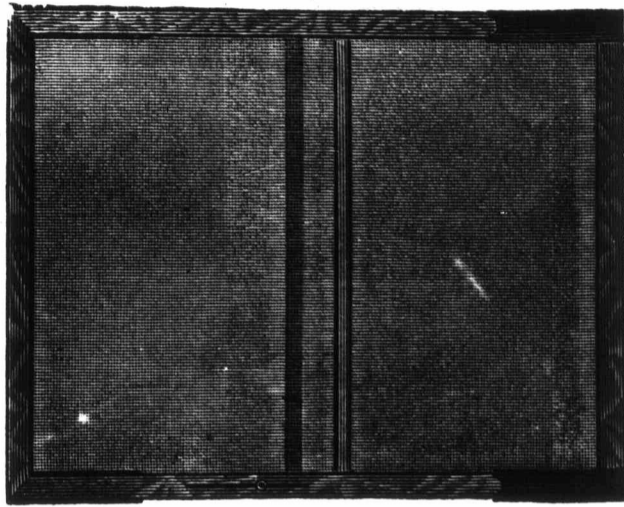
No Carpenter Required to Hang Them.

Delivered at Nearest Railroad Station.

Circulars Free.

POTTER SWEEPER CO.

OTTERVILLE, ONT.



WATER---Clear, Cold and Pure.



The Radial Centre secures water better than any other point made, as it gives the whole surface under the gauze. Circulars free.

223-a

F. G. BULLOCK, Otterville, Ont.

In consequence of the increased demand for my ENGINES, I have added to my shops and machinery, and shall largely increase the production of engines for 1884.



219-y

It is licensed by all Insurance Co.'s and has proved itself to be the most durable.

The Engine for the Northwest is made to burn either coal, wood or straw. Farmers, procure a Genuine White Threshing Engine at the Forest City Machine Works, London, Ont., Can.

GEORGE WHITE, Proprietor and Manager

H. B. WHITE, Supt. of Machinist Dept.

A. W. WHITE, Supt. of Erecting Dept.

HUR. J. WHITE, Secretary-Treasurer.

F. J. WHITE, Assistant-Secretary.

The engines may be seen at Van Tassal's foot bridge warehouse, Belleville.

The "MONARCH" Fanning Mill.

In Capacity, Quality of Work, Adjustability and Finish, unequalled by any.

In Range, Variety of Work, Mechanical Principle and Construction, superior to all others.

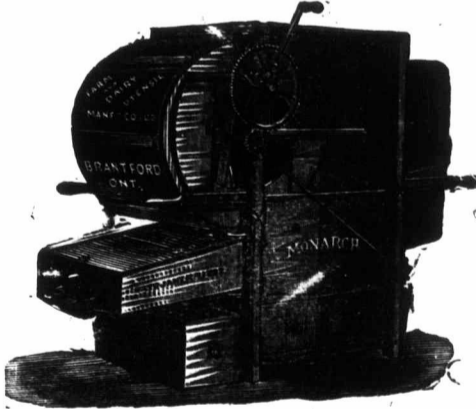
The only Mill that gives perfectly clean seed grain.

The only Grading Mill made.

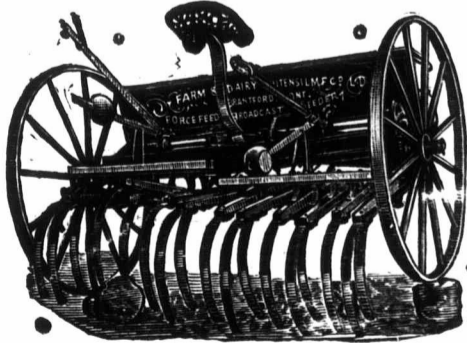
SEND FOR CIRCULARS TO

Farm & Dairy Utensil Mfg. Co., Limited

Brantford, Ont.



Manufacturers of



Improved "Wide-Awake" Separator, Weller's Independent Spring Tooth Sulky Harrow, with or without Broad Cast, and Grass Seeder; Bickford's Non-Freezing, Force, Lift Tank, and Suction Pumps, Drive Pumps.

214-y

Agents Wanted

FOR THE **Citizens Insurance Co., of Canada.**

Head Office, 179 St. James Street, Montreal.

Established 1864—Capital and Assets, \$1,426,985. Government Deposit, \$122,000 Cash.

As the Company transacts Fire, Life and Accident business, a profitable agency is thus offered to those soliciting insurance risks.

Special terms to those who have valuable connection. Farm property insured as low as by Farm Mutuals. No notes. No assessments. Losses paid as soon as proved without discount.

The Stock of this Company is held by many of the wealthiest citizens of Montreal.

CHEAP TELESCOPES

A portable Achromatic Telescope that will tell the time of the church clock in Toronto at three miles off, with extra astronomical eye piece and sun glass for astronomical use. It will show Jupiter's moons, spots on the sun, mountains in the moon, &c. Sent to any address on receipt of \$5.50.

CHAS. POTTER, Optician,
31 King St. East, Toronto.

ESTABLISHED 30 YEARS.

TESTIMONIALS.

A few simple Testimonials that Speak for Themselves.

Ottawa, September 3rd, 1883.

A. NORMAN, Esq.—Dear Sir,—I have experienced considerable benefit from your appliances. I feel stronger and better every day.

Yours truly, R. E. HALIBURTON.

Peterborough, October 15, 1883.

A. NORMAN, Esq.—Dear Sir,—Soon after I commenced to use your Electric Appliances, they opened my bowels, cured my cough and cold, relieved my head, and considerably relieved my catarrh in consequence. The discharge from my head and chest are now easy, and I feel altogether better. My digestion has improved, my stomach is less sour and windy, and I am less troubled with lascivious and vivid dreams. I had previously tried almost all the advertised patent medicines without deriving any good.

Yours truly, J. GREEN.

4 Queen Street East, Toronto.

213-y

A. NORMAN, Proprietor.

VIENNA BAKING POWDER

S. H. & A. S. EWING

Proprietors & Manufacturers

57 & 61 ST. JAMES ST.

MONTREAL.



C. M. Patney

For Sale by all Grocers.

215-y

NORTHERN PACIFIC R. R.

LANDS in Minnesota, North Dakota, Montana, Idaho, Washington and Oregon.

The Northern Pacific country is the newest region open for settlement, BUT THE RICHEST IN NATURAL RESOURCES. Its exceptionally fertile soil, well watered surface, fine wheat and farming lands, best of cattle grounds, large bodies of timber, rich mining districts, healthful climate, great navigable waters, and grand commercial opportunities are the chief attractions which invite a large population.

NOTE 10,818,433 acres or MORE THAN HALF of all the Public Lands disposed of in 1883 were in the Northern Pacific country. Send for maps and publications describing the railroad lands and the country. They are sent FREE.

Address **CHAS. B. LAMBORN,**
Land Com'ry, St. Paul, Minn.

STOCK NOTES.

(Continued from page 252.)

Messrs. Powell Bros., of Springboro, Pa., U. S. A., write us that they have just received an importation from France of forty stallions, and expect another shipment shortly.

T. G. Nankin, of Shade Stock Farm, Merivale, Ont., has just returned home from a purchasing tour, bringing back some fine stock. He writes that he has a sow only two months of age which weighs over 800 pounds.

Mr. James I. Davidson, of Balsam, Ont., had a consignment of Shorthorn cattle from Mr. Cruickshank's famous herd shipped from Glasgow, arriving at Point Levi, Quebec, on May 26. The herd consists of the young bull Baron Bampton and nine heifers.

Professor Lawson's herd of Shorthorn bulls, cows and calves will be sold by public auction at the railway cattle sheds, Richmond depot, Halifax city, Nova Scotia, on Wednesday, Aug. 13th next. This herd is located at Lucyfield, and comprises a long list of excellent stock.

Lord & Cook, of Aultsville, Ont., have made the following sales:—Two-year-old heifers Anselma, Brigette, Benoitte, Denise, and Best-ald, and bull calf and heifer calves Odanah, Mandeline and Grace Darling, all to W. H. Williams, Picton, Ont., for the sum of \$3,000; also two heifer calves, viz., Nellie Bell Second, and Princess Ida to W. N. Randell, of Brockville, Ont., for \$400.

Mr. H. B. Sharman, of Stratford, Ont., has imported a fine herd of Herefords. The yearling bull, President Grant, by President Arthur, was purchased from the late T. J. Carwardine, of Stocktonbury, Leominster, England. He also bought eleven head from Mr. John Hill, of Tehampton Court, Church Stretton, embracing two cows, seven two year old heifers and two yearlings: together with the yearlings Bonny 6th and Countess 10th, purchased from Mr. Thomas Rogers, of Hereford.

J. H. Tennent, veterinary surgeon of this city, has shown us two monstrosities that he has secured this season, in the form of the heads of two double-headed calves. One was taken from a cow belonging to Mr. Wilsie, of Delaware township, the other from a cow belonging to Mr. Parkins, of the same township, by E. Blackwill and J. Prudham, students in the office of J. H. Tennent. In both specimens the heads appear perfect, and all of the organs of both heads in each to be complete, with the exception of one ear, which seems to be double, with a partition in the centre of it. It may be added that both calves, with the exception of the heads, were single, there being but one spinal cord and a single set of organs after leaving the head. The mothers of both calves are living and doing well. Both heads have been carefully preserved by a taxidermist, and can be seen by any person desiring to see a singular *usus nature*, by calling at the office of J. H. Tennent, veterinary surgeon, King street, London.

M. Wilson & Co., Hamilton, Ont., write:—"THE FARMER'S ADVOCATE has proved a success as regards advertising. We have had enquiries from Manitoba to Prince Edward Island, and have sold out all our stock of Hay Loaders."

951 FIRE-PROOF CHAMPION ENGINES

BUILT SINCE 1877.



AS A TRACTION ENGINE

The Champion is Unequaled.

D. T. BEDFORD writes from Raglan, 27th Dec., 1883:—"I have had time to test the traction engine you sent me. I have run it over some very bad hills, where it would give two horses all they wanted to take a portable engine. I started from the station, attaching a wagon with 2200 lbs. of coal and two barrels of water. I had no bother to draw it up any of the hills between Oshawa and Raglan. The steering rig is complete; can run over narrow and slippery roads, in fact for a bad place I would rather run by hand than with horses. I can stop and back up (if wanted) going down a steep hill; can run through a foot of snow, and have done it up steep hills. I have moved a mile with a boiler full of water and fire-box of wood and had plenty, and this was over bad roads. I can run my big Climax Separator from daylight till dark on ten barrels of water, and a great deal less wood than I ever could with the 12 h. p. The 16 h. p. is just the thing to thresh with, sets stiller without a clamp than the 12 h. p. did with clamps, and it ran so easy you could hardly tell whether they were feeding or not. I might write two or three sheets of my exploits with the traction, but have not time. Everybody is pleased with it, and I am more than pleased."

See Our Straw Burner for 1884. It is a pronounced success.

Full supply of Engines, repairs and settlers' outfits kept by our branch Foundry and Machine Shop in Winnipeg.

WATEROUS ENGINE WORKS Co., BRANTFORD, CANADA

ZIMMERMAN FRUIT AND VEGETABLE EVAPORATOR

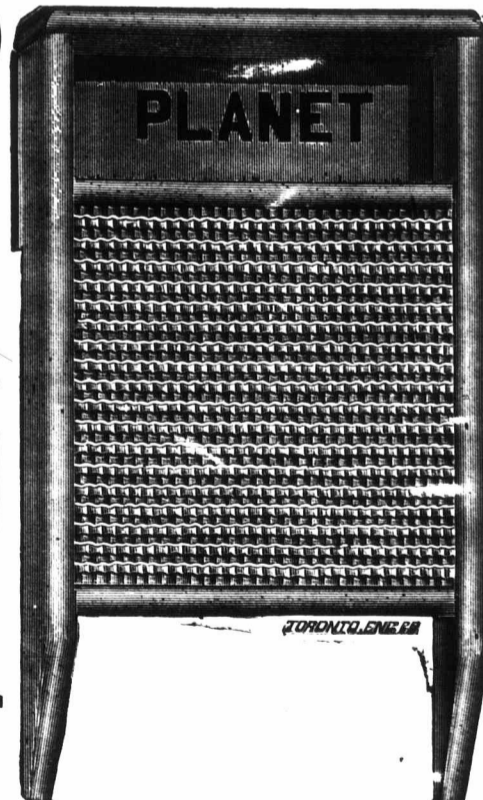
Made of Galvanized Iron. FIVE SIZES 15,000 SOLD. Economical, Durable and Fire Proof. Will pay for itself in 30 days use, out of sale of its own products. FREE! Our Illustrated Catalogue and Treatise. Address, ZIMMERMAN MFG CO., Cincinnati, O. or Burlington, Iowa.

223-b

WASHBOARDS

THE BEST IS THE CHEAPEST.

P
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—THE—
PLANET

IS THE BEST.

ASK FOR IT AND TAKE NO OTHER!

SATISFACTION GUARANTEED!

Saves Time, Labor and Soap.

E. B. EDDY,
HULL, P. Q.

Manufacturer of

PAILS, TUBS, WASHBOARDS and MATCHES

All goods manufactured by me bear my name, and are guaranteed to be the best in the market.
E. B. EDDY.

WHOLESALE AGENTS:

H. A. NELSON & SONS, TORONTO and MONTREAL.

221-y

SWISS SOAP!

Guaranteed Best in the World!
Ask Your Grocer For It!
Manufactured only by the
HURON SOAP COMPANY, Goderich, Ont
220-y

FARM FOR SALE.

That fine farm of 200 acres, more or less, in the township of Delaware, known as Green Park, held by the undersigned in trust for the co-heirs of the late Rothwell Garnett, Esq., being lot No. 10 in the 1st concession. Enquire of **J. SHANLY, London** } Co-trustees
H. MORTIMER, Toronto }
Dated 31st March, 1884. 220-1f

INTERCOLONIAL RAILWAY

The Great Canadian Route to and from the Ocean.

For Speed, Comfort and Safety is Unsurpassed.

Pullman Palace, Day and Sleeping Cars on all through Express Trains.

Good Dining Rooms at Convenient Distances.

NO CUSTOM HOUSE EXAMINATION.

Passengers from all points in Canada and the Western States to Great Britain and the Continent should take this route, as hundreds of miles of winter navigation are thereby avoided.

IMPORTERS and EXPORTERS

will find it advantageous to use this route, as it is the quickest in point of time, and the rates are as low as by any other.

Through freight is forwarded by FAST SPECIAL TRAINS, and experience has proved the Intercolonial route to be the quickest for European freight to and from all points in Canada and the Western States.

The Pullman cars which leave Montreal on Monday, Wednesday and Friday, run through to Halifax without change, and those which leave Montreal on Tuesday, Thursday and Saturday run through to St. John, N. B., without change.

Tickets may be obtained, and also information about the route, and about freight and passenger rates from **R. B. MOODIE, Western Freight and Passenger Agent, 93 Rossin House Block, York St., Toronto, and E. DE LAHOQUE, Ticket Agent, No. 3 Masonic Temple, London.**

D. POTTINGER,
Chief Superintendent, Moncton, N. B.
Railway Office, Moncton, N. B., 10th December, 1883.
217-1f

Agricultural Savings & Loan Company,

LONDON, ONTARIO.

President—WM. GLASS, Sheriff Co. Middlesex.
Vice-President—ADAM MURRAY, Co. Treasurer

Subscribed Capital, - - - \$500,000
Paid Up do, - - - 575,000
Reserve Fund, - - - 61,000
Total Assets, - - - 1,339,000

The Company issues debentures for two or more years in sums of \$100 and upwards, bearing interest at highest current rates, payable half-yearly by coupons.

Executors and Trustees are authorized by law to invest in debentures of this Company.

For information apply to
JOHN A. ROE, Manager.
206-1f

RED RIVER VALLEY LANDS A FARM

\$80 DOWN
\$6667 IN SIX ANNUAL PAYMENTS
7 PER CENT INTEREST
WILL BUY 160 ACRES

SPECIAL OFFER
Actual Settlers
only between the 1st March and the 31st Dec., 1884.

lands included in this offer are the most productive and, considering locality, the cheapest of any unoccupied lands in the United States now open for sale. First applicants will have first chance. Home seekers "catch on." For Maps, Illustrated Papers and other information regarding these lands, write to **J. B. POWER,** Land and Immigration Commissioner, St. Paul, Minneapolis & Manitoba R'y, ST. PAUL, MINN.

22-d

THE LINE SELECTED BY THE U. S. GOV'T TO CARRY THE FAST MAIL

GOING WEST.
ONLY LINE RUNNING TWO THROUGH TRAINS DAILY FROM CHICAGO, PEORIA & ST. LOUIS,

Through the Heart of the Continent by way of Pacific Junction or Omaha to **DENVER,**

or via Kansas City and Atchison to Denver, connecting in Union Depots at Kansas City, Atchison, Omaha and Denver with through trains for **SAN FRANCISCO,**

and all points in the Far West. Shortest Line to **KANSAS CITY,** and all points in the South-West.

TOURISTS and HEALTH-SEEKERS Should not forget the fact that Round Trip tickets at reduced rates can be purchased via this **Great Through Line**, to all the Health and Pleasure Resorts of the West and South-West, including the Mountains of **COLORADO,** the Valley of the Yosemite, the **CITY OF MEXICO,** and all points in the Mexican Republic.

HOME-SEEKERS Should also remember that this line leads direct to the heart of the Government and Railroad Lands in Nebraska, Kansas, Texas, Colorado and Washington Territory.

It is known as the great **THROUGH CAR LINE** of America, and is universally admitted to be the **Finest Equipped Railroad in the World for all classes of Travel.**

Through Tickets via this line for sale at all Railroad Coupon Ticket Offices in the United States and Canada.

T. J. POTTER, Vice-Pres. and Gen. Manager.
PERCEVAL LOWELL, Gen. Pass. Ag't Chicago.
JNO. Q. A. BEAN, Gen. Eastern Ag't, 417 Broadway, New York, and 306 Washington St., Boston.

222-y

W. DOHERTY & CO., ORGAN MANUFACTURERS.

Clinton, - - Ontario.
220-y

Opera Chairs AND Railway Settees

H. R. Ives & Co., Queen St., Montreal
Manufacturers of
Opera Chairs, Railway Settees, Farm Gates, Stable Fittings, Park Settees, Wire Window and Door Guards, Cast Iron Window and Door Guards, Wrought Iron Window and Door Guards, Cemetery Railings, Roof Crestings, Balcony Railings, Vanes for Towers, Composite Wrought Iron Railings and Gates Specialties. Light and Heavy Castings to Order.
Send for Prices.
Office of the **CANADA WIRE CO.,**
215-y
H. R. IVES, President.

Ontario Veterinary College

TEMPERANCE STREET, TORONTO.

The most successful Veterinary Institution in America. All experienced Teachers. Fees, Fifty Dollars per Session. Session 1883-3 begins Oct 25th. Apply to the Principal, **PROF. SMITH, V. S., Edin., TORONTO, CANADA.** 201-1

THE CHEAPEST FORCE PUMP IN THE WORLD!
Especially adapted for spraying fruit trees, watering gardens and lawns, and washing carriages. Will throw a steady stream 60 feet. Can be applied to any service that a cistern or force pump can be used for. Send for Catalogue and Price List. For sale in Canada by Waterous Engine Co., Toronto, Ont.
FIELD FORCE PUMP CO.,
Lockport, N. Y., U. S. A.
217-1f

The Whitfield Stump Extractor.
The superiority of this machine consists in the rapidity and ease with which it can take out the most stubborn stumps; the ease with which it is operated by man or beast, and the great strength and durability of this machine. It leaves no holes to fill up, nor any stumps or snags in the ground. Send for circular of testimonials and particulars about it before purchasing an inferior machine.
JOHN WHITFIELD,
202-1f Dominion Chain Works, Front Street, Toronto.

FIRST-CLASS ENGRAVING
DESIGNS SUPPLIED IN WOOD.
TORONTO ENGRAVING CO.
171-1f

MARTIN
AMBER



WHEAT

MARTIN AMBER WHEAT.—The hardest and most productive Winter Wheat grown in Canada (imported by us two years ago), and has proved by many tests to be the best variety grown in Canada to-day. Our customers who purchased it last season proclaim it the best wheat on their farms. It has a fine straw, stands up well, and is free from rust and midge. Has a long, bald head, white chaff, closely set, and amber grain. Requires only one bushel per acre on account of its great stooling qualities, and yields from 30 to 45 bushels per acre. Every farmer should secure Martin Amber Wheat at once. It will pay you. Order early—stock limited. Price, first quality of seed, \$4 per bushel.

HYBRID MEDITERRANEAN.—Also a new variety, and has done well the past season. The head is remarkably thick set, as close as Deihl, and bearded like the Mediterranean. Has stood the winter well with us, and is worthy of trial. Price, first quality of seed, \$3 per bushel.

DEMOCRAT.—Introduced by us five years ago and has done well. Is hardy and a sure cropper. A white chaff bearded variety, free from rust and midge. Will be largely sown this fall. Price, first quality of seed, \$1.30 per bushel; ten bushel lots, \$1.25 per bushel.

Best two bushel Cotton Bags twenty-five cents each. Samples on application. Also on hand a fine stock of Landreth or Bonnell, Egyptian, Scott, Clawson, &c. Also we have on hand a fine stock of Orchard Grass, Kentucky Blue Grass, Meadow Fescue Grass, Eye Grass, Red Top, &c., for fall seeding for permanent pastures.

Please send for our Fall Wheat and Grass Catalogue, free to all applicants. Correspondence invited. Address
224-ap **PEARCE, WELD & Co., SEED MERCHANTS, LONDON, ONT.**

**ONTARIO PUMP CO., Limited,
TORONTO, ONT.,**

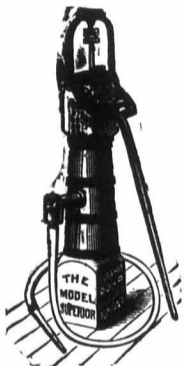
MANUFACTURERS AND DEALERS IN

Wind Mills, I. X. L. Feed Mills, Hay Carriers, Horse Hay Forks, Tanks, Double and Single Acting Pumps, Wood or Iron. Also Steam Pumps and Water Supplies, Iron Pipe and Pipe Fitting, all kinds.

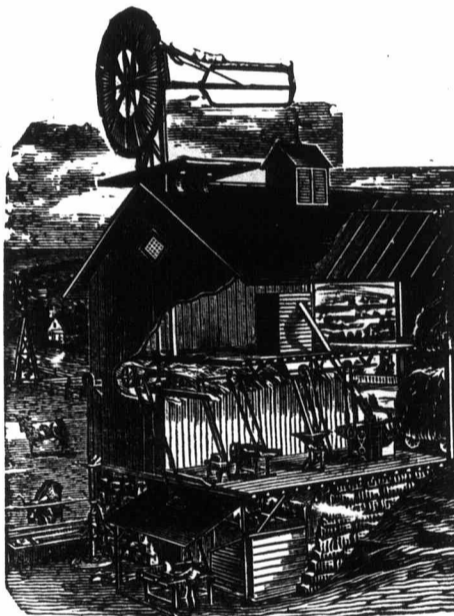
STATE WHAT YOU WANT AND SEND FOR ILLUSTRATED CATALOGUES.



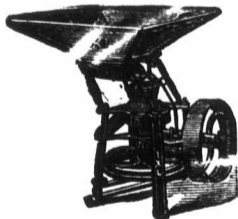
Halladay's Standard Wind Mills. 17 Sizes.



Pumps—Iron & Wood. Force or lift. Deep Geared Wind Mills, for driving Machinery, Pumping well pumps a specialty.



Geared Wind Mills, for driving Machinery, Pumping Water, &c. From 1 to 40 horse power.



I X L FEED MILLS. The cheapest, most durable and perfect iron feed mill ever invented.

ONTARIO PUMP Co.,

Gentlemen,—In regard to the 16-foot geared Wind Mill I bought of you, I can say it more than fills my expectations in every respect. In a fair to good wind I can saw wood at the rate of four cords of hard wood per hour, cut once in two. In a stiff wind I open the fans just half way and get all the power I require. In regard to your feed mill it is just grand. I have ground peas and oats at the rate of a bushel in three and a half minutes, and ground it as fine as one would wish for. I can grind fine corn-meal, also Graham flour. Have ground, since the 15th of February, 325 bushels of grain for customers, besides doing my own work with it. One man brought a grist of screenings, such as small wheat, mustard, and pussy grass seed, thinking that I could not grind it; but I ground it to powder, looking just like ground pepper. Your 13-foot geared mill, I think, is quite large enough for any farmer to do his own work.

Yours truly, EDWIN KEELER, Maitland P. O.

220-ff

March 14, 1884.

AMBER SUGAR CANE MACHINERY.
NEW PARAGON SCHOOL DESKS.
M. BEATTY & SONS, WELLAND, ONT.
Early Amber Cane Sced imported from the States. Pure and reliable. Send for catalogues and prices. 219-h

DR. W. E. WAUGH—Office, The late Dr. Anderson's, 217-y
Dridout Street, LONDON ONT.

FARMS FOR SALE

In Western Ontario a number of choice Farms. Full description list sent on application. Correspondence invited, full information given, and on personal application at my office, plans of the townships shown, enabling strangers to see the position of properties and their proximity to towns, railway stations, &c. Farms with acreage to suit every one. Send to

CHARLES E. BRYDGES,
Real Estate Agent.

Land office, 98 Dundas street west, London, opposite to the City Hotel, for list of farms for sale. 176-t



TRADE MARK

BUY THE GENUINE

BELL ORGAN

made only in Guelph.

IT HAS STOOD THE TEST FOR 20 YEARS.

Send for our Catalogue.

214-y

WM. BELL & CO.

W. & F. P. CURRIE & CO.

100 Grey Nun St., Montreal,

MANUFACTURERS OF

SOFA, CHAIR AND BED SPRINGS.

A LARGE STOCK ALWAYS ON HAND

IMPORTERS OF

Drain Pipes, Vent Linings, Flue Covers, Fire Bricks, Fire Clay, Portland Cement, Roman Cement, Water Lime, Plaster of Paris, Borax, Whiting, China, Clay, etc. 210-y

FARMERS!

The Canadian

STOCK-RAISERS' JOURNAL,

PUBLISHED MONTHLY,

Containing 28 pages, is handsomely illustrated, and has met with such signal success and encouragement from the stockmen and farmers that its publishers were compelled to enlarge it twice during the present year.

It claims to have no superior in any of its departments of Stock Raising, the Farm, the Dairy, Poultry, the Apiary, Horticulture and the Home.

Subscription price, \$1.00 per annum.

To any person forwarding us 50 cents the Journal will be sent to end of 1884. Canvassers wanted. Liberal pay. Specimen copy sent free.

Stock Journal Co.,

48 John St. South, Hamilton, Ont.

214-y